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AUTHOR Siggins, Dennis
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ABSTRACT

The purpose of this study was to determine operational procedures for a mobile laboratory disseminating Business Education Data Dissemination System (BEDDS) materials and other instructional materials, and to make recommendations for improving its operation to better meet the needs of business educators in California secondary schools. Objectives were to determine how materials were used, which were used most frequently, what additional materials should be prepared, and when, where, and how to schedule the mobile laboratory visits. An instrument was developed to record the materials most used, and a questionnaire was sent to 400 business educators (306 responded) who had visited the mobile lab. Major findings and conclusions included these: The lab was found to be a very effective means of disseminating materials; the most popular materials were in the areas of typewriting, bookkeeping, distributive education, job applications, and making change; and teachers preferred to visit the lab at their own schools either after school or during their preparation periods. Recommendations included continuing operation of the mobile lab, scheduling the lab in individual schools, and adding a variety of multimedia materials to the lab. An appendix contains samples of BEDDS forms, and forms, worksheets, and tables used in this study. (BL)

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RECOMMENDATIONS FOR THE OPERATION OF A MOBILE BUSINESS EDUCATION INSTRUCTIONAL MATERIALS RESOURCE CENTER

A Thesis
Presented to
the Faculty of the Department of Business Education
California State University, Los Angeles

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Dennis Siggins
Candidate

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TITLE: "Recommendations for the Operation of a Mobile Business Education Instructional Materials Resource Center"

APPROVED: Ralph L. [illegible]
Alden A. Talbot

DATE: September 1974

ABSTRACT

The Bureau of Business Education of the California State Department of Education developed the Business Education Data Dissemination System (BEDDS), a sharing system for noncommercially-prepared instructional materials. In addition, a new program was developed in business education based on "need-to-know" competencies. In order to help teachers implement the new program, a mobile laboratory with the BEDDS materials and other instructional materials was put into operation.

This study was concerned with determining operational procedures for the mobile laboratory and with making recommendations for improving the operation of the mobile laboratory to meet better the needs of business education instructors. The specific objectives to be met by the study were: (1) to determine the most frequently reviewed, duplicated, and ordered materials; (2) to determine when, where, and how to schedule the mobile laboratory; (3) to determine subject and competency areas in which additional materials should be prepared; and (4) to determine how the materials distributed through the mobile laboratory are used. Although a review of related literature indicated that there were relatively few similar mobile projects, those few projects appeared to be very successful.

An instrument was developed to record the materials most frequently reviewed, duplicated, and ordered by visitors to the mobile laboratory between January 15, 1974, and April 15, 1974. In addition, questionnaires were sent to 400 business educators who had visited the mobile laboratory. Of the returned questionnaires, 306 were used to develop the findings of this investigation.

The major findings of the investigation were: (1) Teachers were selective in ordering and duplicating materials through the mobile laboratory. (2) The most popular materials were in the areas of typewriting, bookkeeping, distributive education, job applications, and making change. (3) Teachers planned to use the materials they received as resource information, in individualized instruction, and to implement the state program in business education. (4) The average time spent in the laboratory was approximately 57 minutes per teacher. (5) Approximately 75 percent of the

teachers indicated that one week or more of notification time is needed before arrival of the laboratory. (6) Although only 28.5 percent of the teachers visited the laboratory at their own schools, 63.3 percent indicated they would have preferred to visit the laboratory at their own schools. (7) After school and during preparation periods were the time periods most preferred by teachers to visit the laboratory.

Based on the findings of the investigation, some of the major conclusions were: (1) The mobile laboratory is a well organized, innovative program that was overwhelmingly accepted by business educators throughout California. (2) The laboratory is very effective as a means of disseminating materials. (3) The best times to schedule the laboratory appear to be between 9:00 a.m. and 12:00 noon and between 1:00 p.m. and 5:00 p.m.

Based on the results of the study, some of the major recommendations were: (1) to continue the operation of the mobile laboratory; (2) to schedule the laboratory in individual schools and, whenever possible, to schedule the laboratory at two schools in one day; and (3) to add to the mobile laboratory a variety of multimedia materials including slides, tapes, filmstrips, and transparencies.

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Chapter 1

BACKGROUND OF THE STUDY AND STATEMENT OF THE PROBLEM

Development of the Business Education Data Dissemination System (BEDDS)

In 1972 the Bureau of Business Education of the California State Department of Education realized that secondary business teachers in California had a great need for instructional materials that would aid them in developing innovative programs in office and distributive education.[1] The staff of the Bureau of Business Education developed the Business Education Data Dissemination System (BEDDS) to meet teachers' needs for instructional materials.

Materials included in the BEDDS are derived from two sources. Various materials in business education are selected from those available through the Educational Research Information Center (ERIC). Other materials included in the BEDDS are developed by teachers. Members of the staff of the Bureau of Business Education solicit the teacher-prepared materials from classroom teachers in their geographic regions.[2] The materials received from classroom teachers are reviewed and graded by a team of teachers appointed by the Bureau of Business Education before the materials are included in the BEDDS. Currently there are 508 teacher-prepared materials in the BEDDS. In order to perpetuate the growth of the BEDDS, additional teacher-prepared materials are constantly solicited. A BEDDS-1 form is used in submitting new materials to the BEDDS. A copy of a BEDDS-1 form appears in Appendix A.

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[1] California State Department of Education, Bureau of Business Education, Business Education Data Dissemination System (Sacramento: State Department of Education, Fall 1973), p. iii.

Catalogs containing abstracts of all the materials in the BEDDS were first distributed by staff members of the Bureau of Business Education at most bureau functions. In February 1974, catalogs were mailed to all public high schools in the state of California. The catalog also contains an introduction to the BEDDS and instructions for ordering materials and for uses of code numbers and descriptors. Materials listed in the BEDDS catalog are placed in broad categories in order to make the inclusion of additional materials easier, as they are submitted.[3] A copy of the introductory pages of the BEDDS catalog is included in Appendix B.

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[2] Ibid.

[3] Ibid., p. 1.

The materials in the BEDDS are distributed by the Vocational Education Resource Information Center (VERIC) in Sacramento, California. An order form, called a BEDDS-2 form, is used in ordering materials from VERIC. A copy of the BEDDS-2 form appears in Appendix C.

Materials are available in two forms--microfiche and hardcopy--and at no cost to the individual or institution ordering the materials. Microfiche is a form of microfilm that provides easy and economical access to the materials. Many pages of material can be placed on a single four-by-six-inch sheet of film. Microfiche is customarily used for frequently-reviewed publications with a wide distribution.[4] Hardcopy refers to materials on paper in unbound form. The word hardcopy is used only to differentiate from microfiche.

Development of the California Business Education Program (CBEP)

One of the major objectives of business education programs in secondary schools has always been to develop entry-level skills in office and distributive occupations. Even though many programs have met this objective successfully, employers constantly complain that graduates are not properly prepared for entry-level positions. The California Bureau of Business Education believed that the curriculum in business education had to be improved in order to supply graduates with the skills needed for entry-level positions. In 1972 the bureau formed a task force to develop a new program in business education based upon "need-to-know" competencies.[5] The task force was headed by Dr. Lois Callahan and included 16 other experienced business educators from California high schools.[6] In addition, four other individuals were used as consultants to the task force.[7]

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[4] Wilmer O. Maedke, Mary F. Robek, and Gerald F. Brown, Information and Records Management (Beverly Hills, CA.: Glencoe Press, 1974).

The task force used six major studies in determining the need-to-know competencies included in the California Business Education Program.[8] Inquiries were sent to city and county employers to aid in determining office competencies.[9] The classifications from Vocational Education and Occupations,[10] the Dictionary of Occupational Titles,[11] and the Occupational Outlook Handbook[12] were used for job descriptions. Studies by Standard Oil, Xerox, and the Human Resources Research Organization were instrumental in setting performance standards in office occupations.[13]

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[5] California State Department of Education, Bureau of Business Education, California Business Education Program Guide (Sacramento: State Department of Education, Fall 1973), p. 1.

[6] Ibid., p. i.

[7] Ibid., p. ii.

[8] Ibid., p. 1.

[9] Ibid., p. 2.

[10] U.S., Department of Health, Education and Welfare, Office of Education, Vocational Education and Occupations, Publication No. OE-8061 (Washington: Government Printing Office, 1969).

Instructional programs, based upon the need-to-know competencies, were written for three office occupations and four distributive occupations in which entry-level employment is available to high school graduates. Three major competency cores were developed--the common core, the office core, and the distributive core. The common core contains 16 competencies that are necessary in all office and distributive occupations. The office core contains competencies needed in office occupations. Some of the competencies in the common core are also found in the office core; however, a greater degree of competency is required in the office core. The distributive core contains basic competencies required for all distributive occupations. In addition to the core competencies, competency modules were developed for the seven occupations selected for inclusion in the CBEP. Pretests, posttests, objectives, instructional ideas, and methods for implementation are included in a program guide. In March 1974 a CBEP guide was distributed to every public high school in California. A copy of the summary of the CBEP is included in Appendix D.

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[11] U. S., Department of Labor, Manpower Administration, Dictionary of Occupational Titles (3d ed.; Washington: Government Printing Office, 1965).

[12] U. S., Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, 1972-73, Bulletin No. 1700 (Washington: Government Printing Office, 1972).

[13] California State Department of Education, California Business Education Program Guide, p. 1.

Development of the Mobile Laboratory

The Bureau of Business Education members thought that the materials in the BEDDS could be helpful to classroom teachers in implementing the CBEP. For one reason or another, however, orders for the materials through VERIC were below expectation. In an effort to disseminate further the BEDDS materials, the Bureau of Business Education, with the cooperation of the Yolo County Office of Education, initiated a mobile instructional materials laboratory.

A 30-foot mobile van was custom built by Edu-Tec, Inc., in accordance with the specifications of the Bureau of Business Education. The mobile van is equipped with a 6500 Onan generator that supplies all the electricity needed to operate the mobile laboratory. The van is also equipped with an IBM Copier I, three microfiche readers, a projection screen, a Singer Caramate slide tape projector, file drawers, cabinets, two bulletin boards, and work tables.

In addition to the materials in the BEDDS, the mobile laboratory also contains the following materials: copies of the CBEP guide; slide tape presentations; materials related to youth groups; publisher materials coordinating their publications with CBEP; and miscellaneous publications of the state, counties, and districts.

The scheduling of the mobile laboratory is done by the five regional supervisors of the Bureau of Business Education. Each supervisor schedules the mobile laboratory in his or her region. The mobile laboratory rotates from region to region on a weekly basis. Teachers are invited to visit the laboratory and to preview the materials available. After examining the materials, a teacher can duplicate or order the materials desired. Limitations are placed on the quantities ordered or duplicated in order to service a greater number of teachers.

The physical operation of the mobile laboratory is the responsibility of the mobile laboratory operations technician, with the cooperation of the regional supervisors. Credit cards needed in the operation were issued to the operations technician. Forms used in the operation of the laboratory were designed by the program manager and the operations technician. Copies of all required forms are included in Appendix E.

Statement of the Problem

This study was concerned with determining operational procedures for the mobile laboratory and with making recommendations for improving the operation of the mobile laboratory to meet better the needs of business education instructors in California secondary schools.

Objectives of the Study

The specific objectives to be met by this study were:

1. To determine the most frequently reviewed, duplicated, and ordered materials.

2. To determine when, where, and how to schedule the mobile laboratory in order to effect maximum usage of the mobile laboratory.

3. To determine subject and competency areas in which additional materials should be prepared.

4. To determine how the materials distributed through the mobile laboratory are used.

Need for the Study

In an effort to upgrade business education in California, the Bureau of Business Education is anxious to improve the services provided through the mobile laboratory. To meet better the proposed objectives of the mobile laboratory, as with all pilot programs, an evaluation is necessary. The Bureau of Business Education expressed a desire that such a study be undertaken.

Limitations of the Study

The mobile laboratory offers teachers a variety of materials from numerous sources; however, this study was limited to the non-commercial, teacher-prepared materials, with the exclusion of the ERIC materials, listed in the BEDDS catalog. This limitation was placed on the study because the main emphasis in the operation of the mobile laboratory during the first six months was on the dissemination of the teacher-prepared materials in the BEDDS. This study was also limited to the school districts and schools visited by the mobile laboratory and to business teachers on the secondary level who visited the laboratory.

The study was further delimited to data gathered from the business teachers visiting the mobile laboratory between January 15, 1974, and April 15, 1974, in order to present necessary information regarding the operation of the mobile laboratory during the 1974-75 school year. The operations technician and other members of the Bureau of Business Education believed that a study based on the first three months of operation would supply relevant information.

Definitions of Terms Used

The following terms are used in this study as defined.

Business Education Data Dissemination System (BEDDS). A dissemination system for noncommercial, teacher-prepared instructional materials and ERIC materials related to business education.

California Business Education Program (CBEP). Instructional programs based upon need-to-know competencies in office occupations and distributive occupations. Need-to-know competencies are the minimum skills needed in a competency to obtain successfully and hold an entry-level position in an office or distributive occupation. The programs contain pretests and posttests, objectives, and instructional ideas for all competencies.

Educational Research Information Center (ERIC). A nationwide information system established by the United States Office of Education which contains curriculum guides, research reports, methods, theoretical papers, and other related materials in education. The materials are listed in various ERIC abstract journals and can be ordered in microfiche or hardcopy.

Learning activity packets (LAPs). A packet of instructional materials designed to aid students in the development of a skill or understanding related to a specific topic. For the purpose of this study, LAPs will include all the materials listed in the BEDDS catalog. Some of the materials are actually student LAPs; however, others are more teacher-orientated materials. The teacher-orientated materials include reports, course outlines, course guidelines, promotional brochures, listings of objectives, and youth group materials.

Review. The quantity of LAPs a teacher actually examines in the mobile laboratory. Since a teacher first reads the abstract of the LAP in the BEDDS catalog, the actual examination of the LAP is called a review.

Teacher needs. For the purpose of this study, teacher needs refer only to the scheduling of the mobile laboratory and to the materials and services that could be provided through the mobile laboratory.

Vocational Education Resource Information Center (VERIC). An information system established by the California State Department of Education designed to provide all teachers in California with vocational education materials from a variety of sources. All of the BEDDS materials and the ERIC materials related to vocational education can be obtained from VERIC. In addition, VERIC will conduct information researches upon request.

Organization of the Study

Chapter 1 has presented background information on the development of the problem, the statement of the problem, the limitations, and definitions of special terminology used in the study.

A review of the related literature is presented in Chapter 2.

Chapter 3 presents the design of the study, including a description of the procedures, instruments, methods, and treatment of the data.

The findings are reported and analyzed in Chapter 4.

Conclusions based on the analysis of the data presented in Chapter 4 are presented in Chapter 5. Specific recommendations on the overall operation of the mobile laboratory are included in Chapter 5.

Chapter 2

REVIEW OF RELATED LITERATURE

In business education, as in all areas of education, innovation must take place. Education must be able to meet the needs of today's students. Every effort must be made to accept changes and to innovate in education. In 1941 Mort and Cornell indicated that it took more than 50 years for an innovation to be accepted in schools.[1] Although some have doubted the 50-year figure, no one doubts that it takes too long for innovations to be accepted in schools.

Short stated:

> . . . Knowledge utilization can no longer be viewed simplistically as a matter of moving knowledge from one place (a resource) to another place (a user). It involves the user's internal knowledge structure, his motivation, his estimate of the source's creditability, the social sanctions that exist for or against use, the availability and appropriate forms of knowledge, as well as the existence of adequate linkage agents or systems.[2]

Carlson believed that a barrier to change was a weak knowledge base.[3] In addition, Paisley indicated that very little influence on educators to innovate was made by impersonal information sources that did not involve a face-to-face confrontation.[4] Personal contact is an important part in innovation.

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[1] P. Mort and F. Cornell, American Schools in Transition (New York: Teachers College, Columbia University, 1941).

[2] E. C. Short, "Knowledge Production and Utilization in Curriculum," Review of Educational Research, XLIII, No. 3 (1973), 283.

Mobile laboratories appear to provide personal contact with information users. The literature reviewed in this chapter describes programs that are representative of mobile laboratory programs in various geographic regions that seem to add a personal contact in information dissemination.

Minneapolis Audio-Visual Laboratory

Through Title I funds, in 1966 the Minneapolis Public Schools started a mobile audio-visual laboratory to instruct teachers in the usage of audio-visual equipment and to disseminate audio-visual materials.[5] The laboratory was a 22-foot van with a seven and onehalf kilowatt generator to supply power. The van was equipped with all types of audio-visual equipment and also included instructional materials of value to teachers. The laboratory visited one school each day. Two substitute teachers were provided by the mobile laboratory. Four teachers each received three hours of instruction daily. Teachers who visited the laboratory seemed to be most interested in developing materials that they could use immediately. Materials were produced in the laboratory by the visiting teachers with the assistance of a media specialist.

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[3] R. O. Carlson, "Barriers to Change in Public Schools," Change Processes in the Public Schools, ed. R. O. Carlson (Eugene: University of Oregon, Center for the Advanced Study of Educational Administration, 1965).

[4] W. J. Paisley and others, Information Needs Expressed by Educators in the State of California (Stanford: Institute for Communication Research, Stanford University, 1972).

[5] Mark E. Goodman, Mobile Audio Visual Instructional Laboratory Project Director's Report 1969-70, an ESEA Title I Project (Minneapolis: Minneapolis Public Schools, January 1971).

No formal evaluation of the project has been made; however, teachers enthusiastically accepted the program. Teachers were appreciative of the help they received. The media specialist, in visiting classrooms, indicated that there was evidence of more enthusiastic participation by students and thus more effective learning.

Kingsport Project

In May 1972 the Tennessee Valley Authority financially assisted Kingsport (Tennessee) City Schools in the development of a mobile laboratory to conduct environmental studies. The objectives of the program were:

1. To provide in-service training to Kingsport City Schools teachers to enable them to conduct environmental education programs.

2. To develop curriculum related to environmental principles, problems, causes of problems, and possible problem solutions.

3. To develop instructional materials related to environmental education programs and to be used in conjunction with the mobile laboratory.

4. To provide teachers with resources.[6]

A 1972 Ford Econoline van stocked with equipment and a reference library was used to conduct environmental studies in communities. Community resources such as vacant lots and sewage plants were used to conduct studies. The summary of the project report prepared by Ronald B. Childress, project director, stated:

> The utilization of the mobile environmental education laboratory for environmental studies is a unique and worthwhile approach for a school system. Considering the many educational benefits, the cost of such a project is very practical. This approach has broad implications for environmental education on a county, regional, or state level.[7]

Pennsylvania State Project

Pennsylvania State University, under a grant from the United States Office of Education, operated a mobile laboratory to instruct teachers in helping students with handicaps that often are not detected.[8] The mobile laboratory was equipped with an IBM computer with 15 student terminals. Teachers went through a complete course which averaged about 30 hours and also received three units of credit from Pennsylvania State University.

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[6] Ronald B. Childress, Mobile Environmental Education Laboratory (Kingsport, TN.: Kingsport City Schools, 1973).

[7] Ibid., p. 14.

The program was very flexible in that teachers could set up their own schedules and complete the course at their own speed. In addition, many more teachers could complete the course in the mobile laboratory than in a college classroom. In a one-week time period, approximately 15 or 20 teachers could complete an equivalent course in a college classroom, while approximately 300 teachers could complete the course in the laboratory in the same time period.

Phyllis E. Lehmann reported that enthusiasm was good in the areas visited by the van. Even school administrators were found to have taken the special education course. School superintendents allowed their teachers to use their preparation periods to visit the laboratory.

The special education course was chosen as the first course taught in the laboratory because of the great need for qualified teachers for the handicapped. Convinced that the mobile concept worked, Pennsylvania State University personnel intended to develop other courses to be taught in the laboratory.

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[8] Phyllis E. Lehmann, "Teacher Training Takes to the Road," Manpower, III, No. 5 (1971).

Bogen Study

Gerald Keith Bogen wanted to appraise the effectiveness of a traveling science lecture program in Oregon.[9] The National Science Foundation supported the program through the University of Oregon. A traveling teacher presented lecture demonstrations to science classes and was available for consultation with science teachers and other faculty members.

Questionnaires were sent to 415 persons visited by the demonstrator. A second questionnaire was sent to 11 teacher demonstrators. The responding teachers thought the program stimulated interest in science and science careers and also increased their skills and techniques in science.

Bogen drew three major conclusions from his investigation. The traveling demonstration program increased the influence of competent science teachers, encouraged the building of simple science laboratory equipment, and provided students with an appreciation of science and science careers. The program was an effective in-service agent for science teachers in Oregon.

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[9] Gerald Keith Bogan, "An Appraisal of the Traveling Science Demonstration Lecture Program in Oregon and Its Effectiveness as an Agent for In-Service Education" (unpublished Doctoral dissertation, University of Oregon, 1963).

Although the National Science Foundation did not continue the program after June 1964, Bogen recommended that some educational agency in Oregon should take over and continue a similar program.

Los Angeles City Project

Two mobile vans provided 102 schools in Los Angeles with a variety of multimedia materials and services.[10] The mobile vans began operations because multimedia centers failed to give direct and frequent contact to teachers in the Los Angeles City schools.

The vans provided teachers with facilities to produce transparencies, slides, tapes, photographs, and super eight films. In addition, the mobile laboratory staff members gave advice to teachers in the use of multimedia materials. The vans each visited two schools daily.

The Elementary and Secondary Education Act (ESEA) Title I evaluation staff prepared a report on the progress of the mobile laboratories. Questionnaires were sent to representatives of all the schools visited; and a second questionnaire was sent to administrators, parent advisory council members, and Title I public relations staff members. Approximately 80 percent of the teachers indicated that the services of the laboratories improved their teaching techniques and that they could better use multimedia materials after visiting the laboratories. Over 80 percent stated that they obtained new ideas in the use of multimedia. About 60 percent stated that more in-service training should be provided.

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[10] Los Angeles Unified School District, Research and Evaluation Branch, "Mobile Instructional Media Services 1971-1972," Technical Report Secondary Components, an ESEA Title I Project (Los Angeles: Los Angeles Unified School District, December 1972).

The evaluation staff concluded that all the ratings were favorable and recommended the purchase of more vans to allow for more frequent visits and services where needed.

Washington Project

The state of Washington intends to use a mobile laboratory in the fall of 1974 for in-service training in career education concepts for teachers in rural areas.[11] Teachers will be able to view curriculum materials, textbooks, kits such as those developed by Science Research Associates, and audio-visual materials. These audio-visual materials will include casettes, video tapes, and

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[11] Letter from Ronald M. Frye, Director of the Washington Mobile Laboratory Project, Cashmere, Washington, June 28, 1974.

8 and 16mm films. The mobile laboratory will remain at one school for three to five days. Dr. Ronald M. Frye, the project director, has indicated that the plans are tentative and may be changed as new ways in which the laboratory can be used are discovered.

Summary

A review of the related literature indicated that innovation is important in education but that too much time is required for innovations to be implemented. A weak knowledge base and impersonal information sources were cited as barriers to innovations. The mobile laboratory programs reviewed in this chapter appeared to provide personal contact in information dissemination. The programs summarized differed in geographical locations, methods of operation, and subject areas covered in the laboratories. Only two of the six programs have been formally evaluated; however, it was indicated that all of the programs were very successful and accepted by teachers. One of the purposes of each of the programs was to provide teachers with information to improve their teaching skills.

The method of investigation, involving the development of a questionnaire, the selection of teachers, and other activities, is presented in Chapter 3.

Chapter 3

DESIGN OF THE STUDY

The Analysis Worksheet

It was imperative to the success of this study to determine the LAPs reviewed, duplicated, and ordered by each visitor to the mobile laboratory. In order to allow the visitors to the mobile laboratory more time to review LAPs, a convenient and time-saving instrument for recording the quantity of LAPs listed, reviewed, duplicated, and ordered was necessary. Two systems and related forms were developed during the first month of the operation of the mobile laboratory; however, the first system proved to be time consuming and the second system provided inadequate information. After the first month of operation, a third form was developed. This form, the analysis worksheet, proved to be time saving and provided the desired information. A copy of the analysis worksheet appears in Appendix F.

Use of the Analysis Worksheet

When the analysis worksheet is used, the identification number of each LAP in the BEDDS is listed on a six-column sheet.

Following each number there are three blank spaces. The first space is marked "review," the second space is marked "copy," and the third space is marked "order." The visitors are asked to place a check mark in the review column next to the identification number of the LAP that they wish to examine. After reviewing the LAP, the visitors are asked to place a check mark in the copy column before duplicating a LAP on the IBM Copier I or to place a check mark in the order column before filling out a BEDDS-2 form. The operations technician verifies all order forms against the analysis worksheets.

Results of the Analysis Worksheets

The data from all of the analysis worksheets completed by all of the visitors to the mobile laboratory from January 15, 1974, to April 15, 1974, were used to determine the LAPs that were most frequently reviewed, duplicated, and ordered.

Development of the Questionnaire

A questionnaire with 26 questions was composed to aid in the completion of this study. The questions were grouped in the following categories: (1) questions regarding the scheduling of the mobile laboratory, (2) questions regarding additional materials and services that could be provided through the mobile laboratory, and (3) questions regarding the visitors' previous knowledge of the BEDDS and its operation. The questionnaire was pilot tested by four teachers who visited the mobile laboratory.

Results of the Questionnaire

Questionnaires and cover letters were mailed to 400 teachers who visited the mobile laboratory. Three of every four visitors who signed the visitors' log as a business teacher or department chairman were selected to receive the questionnaire. Administrators, counselors, secretaries, and teachers from departments other than business education departments were eliminated from the sample. Copies of the questionnaire, cover letter, and visitors' log are included in Appendix G.

A response from 300 teachers (75 percent) was desired. Two hundred sixty questionnaires were completed and returned from the first mailing. A follow-up letter and duplicate questionnaire were mailed to those teachers who had not returned the original questionnaire. The follow-up survey produced the return of 57 additional questionnaires, making the total returned 317 (79 percent). Three hundred six (76.5 percent) of the questionnaires were used in the study. Table 1 shows the number of questionnaires used in the investigation and gives reasons why 11 returned questionnaires were excluded.

Table 1

Number of Business Education Teachers Participating in the Survey

Explanation	Number excluded	Total
Number of questionnaires mailed to teachers		400
Number of questionnaires returned		317
Reasons why certain returned questionnaires were not used in this investigation:		
1. Not completed because the respondents did not receive the LAPs they ordered	2	
2. Not completed, stating a conflict of interest	1	
3. Not completed, stating that the respondent was not a business teacher	1	
4. Respondents were not business education teachers	2	
5. Respondents had previously returned questionnaires but had not inserted their names	4	
6. Returned after the investigation was completed	1	
Total	11	-11
Number of questionnaires used in the investigation		306

Treatment of the Data

The questionnaires were coded and the data were processed through the computer at California State University, Los Angeles. The data from the analysis worksheets were also coded and processed with the questionnaires. Four of the questions from the questionnaire were tallied by hand.

Summary

An analysis worksheet was developed to record the LAPs reviewed, duplicated, and ordered by visitors to the mobile laboratory. The analysis worksheets from all the teachers visiting the laboratory between January 15, 1974, and April 15, 1974, were used in this investigation. A questionnaire with 26 questions was also developed to aid in the investigation. Questionnaires were mailed to 400 teachers who visited the mobile laboratory. Three hundred seventeen questionnaires were returned, and 306 of these were used.

The results of the investigation are presented in Chapter 4.

Chapter 4

FINDINGS AND ANALYSIS

Presented in this chapter is the analysis of the data from the analysis worksheet (see Appendix F) and the questionnaire (see Appendix G). The Business Education Data Dissemination System, participation in the mobile laboratory program, and scheduling of the mobile laboratory are discussed. A summary of the findings is also presented in this chapter.

USE OF THE BUSINESS EDUCATION DATA DISSEMINATION SYSTEM (BEDDS) IN THE MOBILE LABORATORY

The Business Education Data Dissemination System is a sharing system for noncommercial, teacher-prepared materials. One method of disseminating the BEDDS materials is through a mobile laboratory operated by the Bureau of Business Education of the California State Department of Education, with the cooperation of the Yolo County Office of Education. The BEDDS, as related to the mobile laboratory, is discussed in the first part of this chapter.

Use of the BEDDS before Visiting the Mobile Laboratory

Sixty-two percent of the visitors to the mobile laboratory stated that they knew they could order the BEDDS materials directly from the Vocational Education Resource Information Center (VERIC); however, only 29 percent indicated that they had ordered materials directly from VERIC. These data suggest the effectiveness of the mobile laboratory in familiarizing teachers with the BEDDS and VERIC. In addition, approximately 55 percent of the visitors indicated that they would not have ordered the learning activity packets (LAPs) if they had not visited the mobile laboratory. The mobile laboratory appears even more effective in that 97 percent of the visitors stated that it was most beneficial to review the LAPs in the mobile laboratory before ordering or duplicating them.

Subjects Taught by Visitors to the Mobile Laboratory

One of the objectives of this investigation was to determine the LAPs that were most frequently reviewed, ordered, and duplicated. The teachers who visited the mobile laboratory and reviewed the LAPs taught a variety of subjects. As shown in Table 2, approximately 71 percent of the teachers taught typewriting. Other subjects frequently taught by the visitors included shorthand, bookkeeping, office machines, and office practice.

Table 2

Subjects Taught by 280 Teachers Visiting the Mobile Laboratory

Subject	Number of teachers[a]	Percent of total
Typewriting	200	71.4
Shorthand	113	40.4
Bookkeeping	70	25.0
Office machines	54	19.3
Office practice	54	19.3
General business	34	12.1
Recordkeeping	26	9.3
Distributive education	25	8.9
Business math	22	7.9
Simulated office	21	7.5
Business English	20	7.1
Common core	14	5.0
Business law	14	5.0
Data processing	13	4.6
Secretarial procedures	11	3.9
Careers	8	2.8
Consumer education	7	2.5
Work experience	5	1.8
General clerk	5	1.8
Notehand	5	1.8
Filing	4	1.4
Cashier training	4	1.4
Civil service preparation	2	0.7
Medical and legal typing	2	0.7
Office occupations	2	0.7
Records management	1	0.4
Business procedures	1	0.4
Card punching	1	0.4
Graphics	1	0.4
Briefhand	1	0.4
Telephone directory assistance	1	0.4

[a] Total number of teachers in this response group was 280; percentages shown are based on that figure.

LAPs Most Frequently Reviewed

A complete report of the number of times each LAP listed in the BEDDS catalog was reviewed, duplicated, and ordered appears in Table 21 (Appendix H). The LAPs that were reviewed by 40 or more visitors are identified in Table 3 of this chapter. An effort was made to categorize these LAPs by subject; however, only 11 of the 30 LAPs could be clearly categorized by subject. The 30 LAPs were easily grouped according to competencies in the California Business Education Program (CBEP). Among the LAPs most frequently reviewed were six related to typewriting, five related to job applications, three related to the usage of the telephone, three related to making change, and two related to bookkeeping.

LAPs Most Frequently Ordered and/or Duplicated

The LAPs that were duplicated and/or ordered 25 or more times are shown in Table 4. Six LAPs related to typewriting, three related to job applications, three related to making change, two related to bookkeeping, and two related to distributive education were among those most frequently duplicated and/or ordered.

Additional LAPs related to distributive education were very popular with visitors to the mobile laboratory. Once reviewed, the distributive education LAPs were frequently duplicated and/or

Table 3

LAPs Reviewed by 40 or More Teachers Visiting the Mobile Laboratory

LAP number	Subject or competency	Number of teachers reviewing
121	Office programs	86
249.3	Job application	65
239.2	Bookkeeping	61
242.24	Job application	60
141.6	Telephone	57
238.6	Typewriting	55
242.4	Clerical practice	53
242.3	Shorthand	52
256.14	Typewriting	51
254.2	Making change	50
245.1	Cashiering	50
249.2	Job application	48
242.27	Telephone	46
254.8	Making change	45
254.13	Making change	45
106.1	Spelling	44
121.13	Adding machine	43
242.21	Consumer education	43
255.5	Data processing	42
123.6	Typewriting	41
238.23	Typewriting	41
258.12	Typewriting	41
121.4	Telephone	41
249.1	Job application	41
238.5	Typewriting	40
239.1	Bookkeeping	40
249.5	Job application	40
256.45	Instructions	40
257	References	40

Table 4

LAPs Duplicated and/or Ordered 25 or More Times by Teachers Visiting the Mobile Laboratory

LAP number	Subject or competency	Number of teachers duplicating or ordering
121	Office programs	57
239.2	Bookkeeping	52
249.3	Job application	49
238.6	Typewriting	40
242.4	Office practice	40
242.24	Telephone	39
242.3	Shorthand	37
238.5	Typewriting	35
245.1	Cashiering	32
104.2	Math	30
249.5	Job application	30
254.8	Making change	30
242.21	Consumer education	30
242.27	Telephone	29
256.45	Instructions	29
254.2	Making change	29
123.6	Typewriting	28
238.23	Typewriting	28
254.13	Making change	28
106.1	Spelling	27
118.10	Distributive education	27
123.2	Typewriting	26
239.1	Bookkeeping	26
265.1	Grooming	26
118.6	Distributive education	26
256.14	Typewriting	25
242.17	Telephone	25
255.5	Data processing	25
242.11	Zip code	25

ordered by distributive education teachers.

When considering the data reported in Tables 3 and 4, the reader should consider a problem that appeared to exist in the procedures used in reviewing the LAPs. The LAPs listed in the first three columns of the analysis worksheet (see Appendix F) were reviewed many more times than the LAPs listed in the last three columns of the worksheet. After visitors examined the BEDDS catalog and checked the LAPs they wished to review, the operations technician retrieved the LAPs from the files in numerical order. In many instances the teachers did not have enough time to review all of the LAPs they had checked. Perhaps too much time was spent in reviewing the catalog and not enough time in reviewing the LAPs. In other instances teachers stopped reviewing the LAPs as soon as they found five LAPs that they wished to order. This problem might be solved by increasing the number of LAPs a teacher can order or by having a student assistant available to duplicate the LAPs selected. The first problem might be controlled by one of three methods or some combination thereof: (1) Before visiting the mobile laboratory, teachers might review the catalog. (2) If there is a shortage of time available, teachers should be asked to set priorities and list only those LAPs they will be able to review. (3) The operations technician might insist that the teachers mark only five LAPs for review at any one time; such a limitation would practically insure sufficient time for visitors to review the LAPs they list.

Selectivity in Ordering and Duplicating LAPs

The percentage of times that the reviewed LAPs contained in the BEDDS were duplicated and/or ordered is displayed in Table 5. As the table indicates, the visitors were selective in duplicating and ordering LAPs; i.e., only 22 (5.8 percent) of the total 381 LAPs had a duplication and ordering rate of 90 percent or more. This selectivity might be contributed to a number of factors. Many of the teachers indicated that some of the titles and abstracts written for the LAPs were not representative of the LAPs. Other teachers said that some of the LAPs were not written well enough or that they could write a better LAP. Many of the teachers also stated that a review of a LAP was sufficient to give them an idea with which to write LAPs to meet their own needs. Some teachers ordered and duplicated every LAP they reviewed; other teachers did not order or duplicate any of the LAPs they reviewed. In addition, limitations were placed on the number of LAPs a teacher could order. During the first month of this investigation, there were no limitations. During the last two months of the investigation, each teacher was limited to ordering five LAPs. There were no limitations on

Table 5

Percentage of LAPs Contained in the BEDDS that Were Copied and/or Ordered after Being Reviewed

Percentage range[a]	Number of LAPs
90-100	22
80- 89	25
70- 79	47
60- 69	76
50- 59	69
40- 49	56
30- 39	40
20- 29	24
10- 19	10
0- 9	12
Total	381

[a] Percentage of the LAPs reviewed which were then copied and/or ordered.

the number of LAPs that could be duplicated in the mobile laboratory; however, teachers were limited by the amount of time they had available to duplicate LAPs. The use of student assistants to duplicate LAPs might have increased the number of LAPs duplicated.

How the LAPs Received through the Mobile Laboratory Were To Be Used

Many of the visitors to the mobile laboratory indicated that they would use the LAPs they received in more than one way. Seventy-one percent of the teachers indicated that they would use the LAPs as resource information; 51.6 percent stated they would use the LAPs in an individualized instruction mode. One of the objectives of the mobile laboratory was to disseminate LAPs to help teachers implement the CBEP. Thirty-seven percent of the teachers indicated their intention to use the LAPs for purposes of implementation of the CBEP. Approximately 1 percent of the teachers indicated that they did not order or duplicate any LAPs.

Subjects and Competencies in Which Additional LAPs Are Needed

Teachers suggested subject and competency areas in which additional LAPs should be prepared and included in the BEDDS. As shown in Table 6, additional LAPs should be prepared for the follow-

Table 6

Subject and Competency Areas in Which Additional LAPs Should Be Prepared as Indicated by Teachers Visiting the Mobile Laboratory[a]

Subject or competency	Number of teachers
LAPs for CBEP competencies	20
Shorthand	19
Business mathematics	13
Consumer education	13
Distributive education	11
Working with people	11
Data processing	10
Sales, merchandising, retailing	10
Grooming	10
Bookkeeping	10
Typewriting	9
Business law	8
Oral communications	8
General business	7
Careers	7
Handwriting	6
Business English	5
Attitudes	5
Cashiering	5
Office simulation	5

[a] Only those subject and competency areas suggested by five or more teachers are listed.

ing subjects: consumer education, shorthand, distributive education, and bookkeeping. Additional LAPs should be prepared for the following competencies: mathematics computations, data processing, grooming, working with people, handwriting, and oral communications.

Need for Multimedia

Teachers also suggested other instructional materials and media that might be provided through the mobile laboratory. As indicated in Table 7, the areas most frequently suggested as necessary additions to the mobile laboratory were multimedia materials such as films, filmstrips, slides, tapes, transparencies, and lists of free available multimedia materials. Samples of publishers' materials were also suggested.

WHO VISITED THE MOBILE LABORATORY

Teachers throughout the state of California visited the mobile laboratory at various sites in the state. This section of Chapter 4 discusses attendance in the mobile laboratory, reasons for not visiting the laboratory, and the amount of time spent in the laboratory.

Table 7

Additional Instructional Materials and Media that Could Be Provided Business Educators by the Mobile Laboratory as Indicated by Teachers Visiting the Laboratory[a]

Instructional materials or media	Number of teachers
Films, filmstrips	23
Publisher materials	16
List of free and available materials	14
Slides	12
Tapes	12
Curriculum studied, instructional guidelines	7
Writing proposals, sources of funding	7
List of demonstration programs	6
Audio-visual samples	5
Transparencies	5

[a] Only those materials suggested by five or more teachers are listed.

Size of Business Education Departments and Attendance in the Mobile Laboratory

The mobile laboratory visited schools and school districts throughout the state of California in which the size of the business education departments, measured in terms of number of teachers, varied greatly. Table 8 reports the size of the business education departments in which the teachers who visited the mobile laboratory were employed. Departments ranged in size from 1 to 12 teachers. Sixty-three percent of the visitors indicated that there were approximately four to seven teachers in their departments. The average department in terms of size appeared to employ five teachers.

When the mobile laboratory was made accessible to business teachers, the teachers were eager to visit and review the LAPs in the BEDDS. One hundred fourteen teachers stated that every teacher in their departments had visited the laboratory. One hundred eighty-four visitors stated that over 60 percent of the teachers in their departments had visited the laboratory. Approximately 75 percent of the teachers in business education departments invited to visit the laboratory actually did visit it.

Released Time and Voluntary Attendance

In general, attendance in the mobile laboratory was

Table 8

Size of Business Education Departments as Indicated by Teachers Visiting the Mobile Laboratory

Number of teachers employed in department	Number of teachers responding[a]	Percent of teachers
1	18	5.9
2	18	5.9
3	34	11.2
4	49	16.2
5	61	20.1
6	48	15.8
7	36	11.9
8	17	5.6
9	10	3.3
10	8	2.6
11	2	0.7
12	2	0.7
No response	3	0.0
Total	306	100.0

[a] Number of teachers from departments of the size indicated in column one.

voluntary. Only 5 percent of the teachers were required to visit the laboratory. Approximately 26 percent of the teachers were given released time to visit the laboratory. When considering the data, the average attendance of approximately 75 percent of the teachers of all business education departments is very impressive. The interest of business educators to innovate and/or improve their programs is apparent.

One notable fact is that teachers who were given released time used the copying equipment in the laboratory more than the teachers who were not provided released time. This indicates that those teachers given released time had more time to duplicate LAPs in the mobile laboratory.

Reasons for Not Visiting the Mobile Laboratory

One of the purposes of this investigation was to discover why certain teachers did not visit the mobile laboratory. The teachers who visited the laboratory were asked to state why other teachers in their departments did not visit the laboratory. The reasons given are listed in Table 9. A personal conflict was the reason stated by 29.6 percent of the teachers. Approximately 25 percent indicated that a lack of interest was the reason for non-attendance. The lack of interest might have been caused by

Table 9

Possible Reasons for Not Attending the Mobile Laboratory as Indicated by Teachers Visiting the Laboratory

Reason	Number of teacher responses	Percent of responses
Personal conflicts	69	29.6
Lack of interest	58	24.9
Teaching conflicts	51	21.9
Insufficient notice	24	10.3
Visited special workshop	11	4.7
Distance	3	1.3
Strike	3	1.3
Other	14	6.0
No response	106	0.0
Total	339[a]	100.0

[a] Some teachers indicated more than one reason. Percentage figures are based on the total of 233 responses.

insufficient information regarding the service provided by the laboratory. A teaching conflict was the reason stated by approximately 22 percent of the teachers. In some instances the laboratory visited a school from 8:00 a.m. to 12:00 noon and teachers could not secure released time to visit the laboratory. Approximately 10 percent indicated that insufficient notice regarding the availability of the mobile laboratory was the reason for nonattendance.

Required Notice before Arrival of the Mobile Laboratory

The amount of time that teachers believed to be sufficient notice before the mobile laboratory is scheduled to arrive is shown in Table 10. Approximately 75 percent of the teachers indicated that one week or more of notification time is needed before arrival of the mobile laboratory. This indicates that the Bureau of Business Education should continue to give teachers at least a one-week previsitation notice. The operations technician observed that on some occasions teachers were given substantially more than a one-week notice; and on the day the laboratory visited, the teachers were not prepared. Perhaps when teachers were given more than one week of advance notice, a written reminder or a telephone call should have been made one week before the scheduled date of arrival.

Table 10

Suggested Length of Notification Time before Arrival of the Mobile Laboratory at a School as Indicated by Teachers Visiting the Laboratory

Number of days	Number of teachers	Percent of teachers
2	22	7.3
3	21	6.9
4	8	2.6
5	23	7.6
7	140	46.2
10	41	13.5
14	48	15.8
No response	3	0.0
Total	306	100.0

Time Spent in the Mobile Laboratory

The amount of time teachers spent in the mobile laboratory is reported in Table 11. Approximately 56 percent of the teachers spent one hour or more in the laboratory. Less than one hour was spent in the laboratory by approximately 44 percent of the teachers. The average time spent in the laboratory was approximately 57 minutes per teacher.

SCHEDULING OF THE MOBILE LABORATORY

During the time period of this investigation, the mobile laboratory made approximately 75 visits in different locations and at different times. This part of Chapter 4 discusses the scheduling of the mobile laboratory including the site locations, times of visits, methods of informing teachers about the availability of the laboratory, and the number of teachers in the mobile laboratory at any one time. Suggestions made by visitors to improve the service provided by the laboratory are also discussed.

Who Informed Teachers of the Opportunity to Visit the Mobile Laboratory

Table 12 presents the sources through which teachers were informed of the opportunity to visit the mobile laboratory. Regional

Table 11

Amount of Time Spent in the Mobile Laboratory as Indicated by Teachers Visiting the Laboratory

Approximate number of minutes	Number of teachers	Percent of teachers
5	4	1.3
15	16	5.3
30	63	20.7
45	51	16.8
60	73	24.0
90	42	13.8
120	23	7.6
More than 120	32	10.5
No response	2	0.0
Total	306	100.0

Table 12

Source of Information for Teachers about the Opportunity to Visit the Mobile Laboratory

Source	Number of teachers	Percent of teachers
Bureau of Business Education	80	26.7
Department chairman	68	22.7
District office	56	18.7
District office and Bureau of Business Education	17	5.7
School administrator	14	4.7
Another teacher	13	4.3
County office	9	3.0
Department chairman and Bureau of Business Education	9	3.0
Other	34	11.2
No response	6	0.0
Total	306	100.0

supervisors of the Bureau of Business Education directly informed 26.7 percent of the teachers; 22.7 percent were informed by their department chairmen; and 18.7 percent were informed by their district offices. Other sources appear in Table 12.

The above mentioned sources used three principal methods of informing teachers of the opportunity to visit the mobile laboratory. Fifty-two percent of the teachers were notified by written notices; 22 percent were notified by announcements, possibly at department meetings or at bureau functions; and approximately 8 percent were informed by word of mouth.

Locations Where Teachers Visited the Mobile Laboratory

The mobile laboratory visited a number of schools, district offices, county offices, and college campuses during the time period of this investigation. The locations where 305 teachers visited the laboratory appear in Table 13. Approximately 29 percent visited the laboratory at their own schools; 24.9 percent visited the mobile laboratory at their district offices; 23.9 percent visited the laboratory at other schools; and approximately 16 percent visited the laboratory at special workshop locations.

Table 13

Locations Where the Mobile Laboratory Was Visited

Location	Number of teachers	Percent of teachers
Own school	87	28.5
District office	76	24.9
Another school	73	23.9
Special workshop	50	16.4
County office	9	3.0
Regional occupation center	8	2.6
College campus	2	0.7
No response	1	0.0
Total	306	100.0

Locations Where Teachers Would Prefer to Visit the Mobile Laboratory

The locations where 196 teachers who visited the mobile laboratory would have preferred to visit the laboratory are reported in Table 14. As shown in the table, 63.3 percent would have preferred to visit the laboratory at their own schools; 18.4 percent would have preferred to visit the laboratory at their district offices; and approximately 11 percent would have preferred to visit the laboratory anywhere in their general areas.

One hundred sixteen teachers indicated reasons for preferring to visit the laboratory at one particular location. Convenience was the reason stated by 53.4 percent; approximately 20 percent said they would have had more time to spend in the laboratory; and approximately 11 percent said that traveling distance to the laboratory was the reason for preferring one particular location. These are probably reasons why teachers preferred to visit the laboratory at their own schools, since 63.3 percent of the teachers indicated they would have preferred to visit the laboratory at their own schools.

Table 14

Locations Where Teachers Would Have Preferred to Visit the Mobile Laboratory

Location	Number of teachers	Percent of teachers
Own school	124	63.3
District office	36	18.4
General area	21	10.6
County office	9	4.6
Special workshop	6	3.1
No response	110	0.0
Total	306	100.0

Time of Day that Teachers Visited the Mobile Laboratory

The mobile laboratory was scheduled at various locations during different time periods. The hours of the day that 306 teachers indicated they visited the laboratory are reported in Table 15. Many teachers indicated that they visited the laboratory during more than one time period. One hundred forty-eight teachers visited the laboratory between 9:00 a.m. and 12:00 noon; 289 teachers visited the laboratory between 1:00 p.m. and 5:00 p.m. Only 15 teachers visited the laboratory before 9:00 a.m., and only 18 teachers visited the laboratory during the noon hour. These data suggest that the laboratory might have effectively been scheduled for two locations daily with traveling time during the noon hour. With two locations visited daily, more teachers might have been able to visit the mobile laboratory at their own schools.

Preferred Time to Visit the Mobile Laboratory

The time periods that teachers indicated they would prefer to visit the laboratory are reported in Table 16. Some teachers indicated more than one preferred time period. As the table indicates, 205 teachers preferred to visit the laboratory after school; and 126 teachers preferred to visit the laboratory during their preparation periods.

Table 15

Hour of Visit to the Mobile Laboratory

Time period	Number of teacher responses
8:01- 9:00	15
9:01-10:00	44
10:01-11:00	55
11:01-12:00	49
12:01- 1:00	18
1:01- 2:00	55
2:01- 3:00	85
3:01- 4:00	115
4:01- 5:00	34
After 5:00	15
Total	485[a]

[a] Many teachers visited the laboratory during more than one time period.

Table 16

Preferred Time Period for Visiting the Mobile Laboratory

Time period	Number of teacher responses
Before school	14
During preparation period	126
During lunch period	18
After school	205
Total	363[a]

[a] Many teachers preferred to visit the laboratory during more than one time period.

Available Time to Visit the Mobile Laboratory between 8:00 a.m. and 12:00 Noon

Teachers were asked to indicate the amount of available time they would have to visit the laboratory if it were again scheduled in their schools between 8:00 a.m. and 12:00 noon. The amount of available time reported is shown in Table 17. Approximately 54 percent stated that they would have between 30 minutes and one hour; 27.3 percent said they would have no available time. The average amount of available time reported was approximately 40 minutes. If student assistants would duplicate materials in the mobile laboratory for teachers, teachers could use their limited time in reviewing LAPs only.

Table 17

Amount of Available Time Teachers Indicated They Would Have to Visit the Mobile Laboratory between 8:00 a.m. and 12:00 Noon

Number of minutes	Number of teachers	Percent of teachers
None	81	27.3
15	26	8.8
30	48	16.2
45	53	17.8
60	60	20.2
90	11	3.7
120	9	2.7
More than 120	10	3.4
No response	9	0.0
Total	306	100.1[a]

[a] Excess above 100 percent is due to the rounding to one decimal place.

Available Time to Visit the Mobile Laboratory between 1:00 p.m. and 5:00 p.m.

Teachers were asked to indicate the amount of available time they would have to visit the laboratory if it were scheduled in their schools between 1:00 p.m. and 5:00 p.m. The amount of available time reported is shown in Table 18. Approximately 77 percent of the teachers stated that they would have one hour or more to spend in the laboratory. As these data suggest, maximum usage of the laboratory will not be a problem; however, the laboratory might be too crowded in afternoon sessions for effective use.

Maximum Number of Teachers Who Can Work Effectively in the Mobile Laboratory at Any One Time

Approximately 74 percent of the visitors to the mobile laboratory stated that six or fewer teachers were in the laboratory at any one time. The average was 5.41 teachers. Teachers were asked to indicate the maximum number of teachers they thought could work effectively in the laboratory at any one time. The data are reported in Table 19. Approximately 77 percent of the teachers indicated that five or fewer teachers could work effectively at any one time. The average suggested was 4.40 teachers. These data suggest that the teachers thought the mobile laboratory was too

Table 18

Amount of Available Time Teachers Indicated They Would Have to Visit the Mobile Laboratory between 1:00 p.m. and 5:00 p.m.

Number of minutes	Number of teachers	Percent of teachers
None	8	2.7
15	5	1.7
30	32	10.7
45	24	8.0
60	85	28.4
90	41	13.7
120	64	21.4
More than 120	40	13.4
No response	7	0.0
Total	306	100.0

Table 19

Maximum Number of Teachers Who Can Work Effectively in the Mobile Laboratory at a Given Time

Number of teachers in laboratory	Number of teachers responding	Percent of teachers responding
1	1	0.3
2	21	7.1
3	57	19.2
4	96	32.3
5	54	18.2
6	50	16.8
7	8	2.7
8	8	2.7
10	2	0.7
No response	9	0.0
Total	306	100.0

crowded.

Comments Offered by Teachers Related to the Service Provided by the Mobile Laboratory

Visitors to the laboratory made a number of comments related to the service provided by the mobile laboratory. Table 20 reports the suggestions. Teachers complimented the mobile laboratory with comments such as "fantastic," "worthwhile," "very helpful," "great," "well organized," "excellent idea," and "impressive." These comments indicate the overall acceptance of the laboratory in that the related question on the questionnaire only asked for comments that would improve the service provided by the laboratory. The main suggestions for improvement of service included those regarding improvement of the duplicating system, improvement of the ordering system, limiting the number of teachers in the laboratory, offering better publicity, visiting schools more often, and improving the quality of the LAPs.

SUMMARY

Chapter 4 has presented the findings of the investigation. Findings were presented under three major headings. The major findings are summarized in this section.

Table 20

Comments Made by Teachers Regarding the Operation of the Mobile Laboratory[a]

Comment	Number of teachers
Fantastic service; Excellent idea	39
Have not received LAPs; Improve service	26
Improve duplicating system	17
Lab was too crowded; Limit number of teachers	15
Visit schools more often	14
Need better publicity for mobile laboratory	11
Improve quality of LAPs	10
Need more time in mobile laboratory	9
Operator very helpful	9
Add more LAPs	8
Weed out some LAPs	6
Need BEDDS catalogs in schools	5
Lower limitations on ordering	5
Visit individual schools	5

[a] Only comments made by five or more teachers are listed.

First, the LAPs most frequently reviewed, duplicated, and ordered were identified. Visitors to the laboratory were selective in ordering and duplicating the LAPs. Teachers were familiar with the BEDDS and VERIC but rarely used the service before visiting the laboratory. Uses for the LAPs received were identified. Teachers thought additional LAPs should be prepared in a number of subject matter and competency areas. Teachers also requested that multimedia materials be included in the mobile laboratory.

Part two of the chapter revealed the size of business education departments and reported that approximately 75 percent of the teachers from business education departments visited by the laboratory took advantage of the opportunity to visit the laboratory. Attendance in the laboratory was mainly on a voluntary basis. Reasons for not visiting the laboratory were discussed. Teachers believed that at least a one-week notice should be given before the scheduled date of a visit. The average time spent in the laboratory by visiting teachers was approximately 57 minutes per teacher.

The third section of the chapter further discussed the scheduling of the mobile laboratory. Most teachers were informed of the opportunity to visit the laboratory in writing by the Bureau of Business Education. Teachers visited the laboratory at a number of different locations, but the majority of teachers would have preferred to visit the laboratory at their own schools. Convenience was the reason most frequently stated for preferring a particular location to visit the laboratory. The majority of teachers preferred to and actually did visit the mobile laboratory after school hours. Teachers thought that the laboratory was too crowded for effective usage. Teachers also made suggestions that might help to improve the service provided by the mobile laboratory.

Chapter 5 presents the summary, conclusions, and recommendations of this investigation.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The Problem

This study was concerned with determining operational procedures for the mobile laboratory and with making recommendations for improving the operation of the mobile laboratory to meet better the needs of business educators in the California secondary schools. More specifically, this study was concerned with meeting the following objectives:

1. To determine the most frequently reviewed, duplicated, and ordered materials.

2. To determine when, where, and how to schedule the mobile laboratory in order to effect maximum usage of the mobile laboratory.

3. To determine subject and competency areas in which additional materials should be prepared.

4. To determine how the materials distributed through the mobile laboratory are used.

Methodology

Related literature was reviewed. An analysis worksheet was prepared to record the LAPs reviewed, duplicated, and ordered by visitors to the laboratory. A questionnaire was then developed as a means of meeting the objectives of the investigation. Questionnaires were mailed to 400 business educators who visited the laboratory. Three hundred six questionnaires were returned and used to develop the findings of this study. A summary of the findings follows.

Summary of Findings

1. Approximately 64 percent of the visitors stated that they were familiar with the BEDDS before visiting the laboratory; however, only 29.3 percent indicated that they had previously ordered LAPs, and 55.5 percent stated they would not have ordered the LAPs if they had not visited the laboratory.

2. Ninety-seven percent of the visitors stated it was most beneficial to preview the LAPs before duplicating or ordering LAPs.

3. The LAPs most frequently reviewed, duplicated, and ordered were in the areas of typewriting, job applications, usage of the telephone, making change, bookkeeping, and distributive education.

4. Teachers were selective in ordering and duplicating LAPs; i.e., only 22 of the total 381 LAPs available were duplicated

or ordered 90 percent or more of the times they were reviewed.

5. Teachers suggested that additional LAPs be developed in the following areas: shorthand, consumer education, data processing, typewriting, distributive education, grooming, working with people, and oral communications.

6. Multimedia materials such as films, filmstrips, tapes, and transparencies were suggested additions to the laboratory.

7. A problem appeared to exist in the procedures used in reviewing the LAPs. Those LAPs listed in the first three columns of the analysis worksheet (see Appendix F) were reviewed many more times than the LAPs listed in the last three columns.

8. Some teachers indicated more than one use for the LAPs they received through the mobile laboratory. Seventy-one percent stated they would use the LAPs as resource information; 51.6 percent indicated they would use the LAPs in individualizing instruction; and 37.6 percent stated they would use the LAPs to implement the California Business Education Program.

9. The average size of business education departments visited by the laboratory appeared to be five teachers, and approximately 75 percent of the teachers in all the business education departments invited to the laboratory did visit the laboratory. Teaching conflicts and personal conflicts were the main reasons why

other teachers did not visit the laboratory, as indicated by the teachers who did visit.

10. Approximately 76 percent of the teachers suggested that notification of one week or more be given before the scheduled arrival date of the mobile laboratory.

11. On the average, teachers spent approximately 57 minutes in the laboratory per visit.

12. Of the 306 teachers involved in this investigation, some had the opportunity to visit the laboratory during more than one time period. Approximately 65 percent of the teachers visited the laboratory between 2:00 p.m. and 4:00 p.m., and 48.4 percent visited between 9:00 a.m. and 12:00 noon. Approximately 41 percent of the teachers preferred to visit the laboratory during their preparation periods, and 67 percent preferred to visit the laboratory after school hours.

13. Approximately 85 percent of the visitors stated they would have 45 minutes or more to spend in the mobile laboratory between 1:00 p.m. and 5:00 p.m. ,on a future date. Only 47.8 percent stated they would have 45 minutes or more to spend in the mobile laboratory between 8:00 a.m. and 12:00 noon on a future date.

14. Over 28 percent of the teachers visited the laboratory at their own schools, and approximately 25 percent visited the

laboratory at their district offices. Approximately 63 percent indicated they would have preferred to visit the laboratory at their own schools, with 53.4 percent stating that convenience was the reason.

15. The average number of teachers in the laboratory at any one time was five, whereas teachers indicated that only four teachers could work effectively in the laboratory at any one time.

16. The visitors made suggestions for improving the service provided by the laboratory. The suggestions most frequently stated were: The laboratory should visit more often; Limit the number of teachers in the laboratory; Improve the ordering system; Improve the duplicating system in the laboratory.

CONCLUSIONS

Based on the data presented and analyzed in Chapter 4, the following conclusions are drawn.

1. The mobile laboratory is a well organized, innovative program that was overwhelmingly accepted by business educators throughout California.

2. Teachers were selective in ordering and duplicating LAPs that they reviewed in the laboratory. Some of the LAPs met the particular needs of the teachers while other LAPs did not.

3. Teachers were particularly interested in LAPs in the following areas: typewriting, bookkeeping, distributive education, usage of the telephone, making change, and job applications.

4. The mobile laboratory is very effective as a means of disseminating LAPs in that 97 percent of the visitors stated it was most beneficial to review the LAPs before duplicating or ordering LAPs.

5. The mobile laboratory provided teachers with the motivation to order LAPs. Approximately 55 percent of the visitors stated that they would not have ordered LAPs if they had not visited the mobile laboratory.

6. Most of the LAPs disseminated through the laboratory are used as resource information or in individualized instruction. Approximately 38 percent of the teachers use the LAPs to implement the California Business Education Program.

7. Teaching conflicts and personal conflicts appear to be the main reasons why teachers did not visit the laboratory.

8. More teachers visited the mobile laboratory when it was scheduled at their own schools, and the majority of teachers (63.3 percent) preferred to visit the laboratory at their own schools.

9. The best times to schedule the laboratory appear to be between 9:00 a.m. and 12:00 noon and between 1:00 p.m. and 5:00

p.m. Most teachers visited the laboratory during these hours.

10. Teachers prefer to visit the laboratory either during their preparation periods or after school hours.

11. At least a one-week notification period is required by schools and teachers prior to the scheduled arrival date for the mobile laboratory.

12. The LAPs ordered from VERIC through the mobile laboratory took too long to be processed.

RECOMMENDATIONS

Based on the data presented and analyzed in Chapter 4 and on the expertise of the operations technician, the following recommendations are made.

1. The mobile laboratory program should continue to serve the needs of business educators in California as it did during the spring semester of 1974.

2. The mobile laboratory should be scheduled in individual schools. Teachers would be able to spend more time in the laboratory by using their preparation periods.

3. A student assistant should be provided by each school visited. The student could duplicate LAPs for the teachers, and teachers could use their time in reviewing materials only. If the

laboratory were crowded, teachers could review the LAPs and return later to pick up their copies, thus making room for other teachers to review LAPs.

4. The number of LAPs that teachers are allowed to order should be increased. After teachers have reviewed the LAPs and know that the LAPs will aid their programs, they should be allowed to order them.

5. When there are two or more teachers waiting to duplicate LAPs, each teacher should be limited to duplicating only three LAPs at one time.

6. VERIC should process and fill orders from the laboratory within two weeks. A poor delivery system can discourage teachers on the services of the Bureau of Business Education and curtail the motivation established by the mobile laboratory.

7. The operations technician should continue to require teachers to review the LAPs before ordering or duplicating them. With the opportunity to review LAPs in the laboratory, teachers know the LAPs that will help them; and the State can save time and money by not reproducing LAPs that would not be used.

8. Whenever possible, the laboratory should be scheduled at two schools in one day. The noon hour could be used for traveling, since only a few teachers use the laboratory during the noon

hour.

9. A brochure should be developed to inform teachers about the laboratory. All the materials and services provided by the laboratory should be listed and discussed. Review of the BEDDS catalog before visiting the laboratory should be stressed. A request form asking for an indication of the number of teachers in the department, their preparation periods, and whether or not teachers will be allowed released time should be attached to the brochure.

10. Schools should be notified of the opportunity to visit the laboratory at least one week in advance and possibly two weeks in advance. If the laboratory is scheduled more than one week in advance, a form letter from the Bureau of Business Education reminding teachers of the visit should be sent to the school about five days before the visit. Whenever possible, arrangements for the scheduling of the laboratory should be made with department chairpersons.

11. Additional LAPs should be prepared in the following subject matter and competency areas: distributive education, typewriting, consumer education, bookkeeping, handwriting, grooming, oral communications, and working with people.

12. A variety of multimedia materials including slides, tapes, filmstrips, and transparencies should be added to the mobile

laboratory. In addition, a list of free materials and their sources should be included in the mobile laboratory.

13. A study to evaluate the LAPs in the BEDDS should be undertaken. Possibly some of the LAPs should be excluded and the quality of some should be improved. The weeding out of some of the LAPs could save time for teachers reviewing the catalog and the LAPs in the laboratory.

14. A study should be undertaken each year to determine the effectiveness of the laboratory and to determine the needs of business educators in California that could be met through the mobile laboratory.

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BIBLIOGRAPHY

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APPENDIXES

APPENDIX A

A BEDDS-1 FORM

For Office Use

Code No.

Business Education Data Dissemination System (BEDDS)

SUBMITTAL OF MATERIALS

Date submitted ____________________

District ____________________ Address ____________________

School ____________________ Address ____________________

____________________ Phone No. ____________________
(Area Code)

Submitted by ____________________ ____________________
Name. Title

Kind of Material

Basic Business ____ Office Ed. ____ Distributive Ed. ____

Vocational Ed. ____ Teacher Training ____ Other ____________

Description of Data to be Placed into BEDDS

Title for catalog **(limit 40 spaces)**

____

Abstract description of material: (see instructions on reverse)

BEDDS-1

APPENDIX B

INTRODUCTORY PAGES OF THE BEDDS CATALOG

COPY

INTRODUCTION[1]

Recent innovations in California distributive, office and personal business education programs have created a demand for appropriate instructional materials. Business educators have been making an increasing number of requests for information regarding these respective program areas. In an attempt to accommodate these requests, the Bureau of Business Education has created the Business Education Data Dissemination System (BEDDS).

BEDDS is designed to make available to business educators a wide array of information, with emphasis on curriculum and instructional materials through a system which maximizes speed in retrieval and dissemination. Materials are obtained from two sources: (1) selected materials from the Educational Research Information Center (ERIC) and (2) original materials written by classroom teachers. Bureau staff solicit materials developed by teachers which are considered appropriate for dissemination. A review team of teachers appointed by the Bureau then evaluates and codes these materials for inclusion in the system.

One type of microform is being used to provide easy access to the materials. This principal form of information developed and disseminated to business educators is microfiche. Hard copy (printout) may be obtained as indicated in the catalog. The Vocational Education Resource Information Center is the agency from which microfiche may be ordered. As specified in the catalog, individual sets of microfiche, or hard copy, may be obtained in limited quantities directly from the

Vocational Education Resource
Information Center (VERIC)
Vocational Education Section
State Department of Education
721 Capitol Mall
Sacramento, CA 94814

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[1] Reproduced from: Preliminary Draft, Business Education Data Dissemination System, Catalog Two, Bureau of Business Education, California State Department of Education, Sacramento, Fall 1973. Pp. iii-vi, 1, and 2.

Total sets of the microfiche may be borrowed by special arrangement from the regional supervisors of business education.

Business educators may wish to submit their own materials to share with others via BEDDS. A BEDDS-1 form should be completed to accompany the materials. If considered appropriate by the review team, materials will then be microfilmed and entered on microfiche ready for dissemination. Materials submitted for inclusion should be of reproducible copy--black on white, either mimeo or typewritten. Avoid Xerox, photocopy, and spirit duplicating. Dittoed copy does not appear on the film because of the poor contrast.

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HOW TO USE THIS CATALOG

The list of educational materials in this catalog has been coded in broad categories. These categories correspond to the occupational codes and titles for vocational office and distributive education programs, with some random numbers used for basic business and general vocational topics. More definitive categories have not been used to maintain ease in adding to and removing items from the list.

Ordering individual titles

A limit of 10 separate titles of microfiche or 5 of hard copy may be ordered free of charge by completing the enclosed BEDDS-2 form, "Order Sheet for Individual Units." To prevent duplication of orders within a school, please obtain the signature of the department chairman and the administrator in charge of vocational education in your district. These orders should be mailed to the Vocational Education Resource Information Center, Vocational Education Section, State Department of Education, 721 Capitol Mall, Sacramento, CA 95814. Total sets of the microfiche may be borrowed by special arrangement from the regional supervisors of business education.

Review of ERIC materials

ERIC microfiche may be reviewed at one of the ERIC centers listed at the back of this catalog. Each regional supervisor has a complete set of the ERIC materials identified in the ERIC section of this catalog.

Use of Code numbers

All materials listed in the "Selected ERIC materials" section of this catalog are identified with an ED number. When requesting ERIC titles be sure to correctly identify each document by ED number on the BEDDS-2 form.

In the "Original Materials Section," each title is identified with a respective ID number. Be sure to use the correct ID number on the BEDDS-2 form when requesting original materials.

Use of Descriptors

To give an indication of the content of the documents in the "Original Materials Section," each title has been briefly abstracted and categorized by the use of "descriptors." The following list of descriptors will be helpful in determining the components of each document:

A	Teacher Resource Materials
B	Student Learning Package
C	Course Outlines
D	Objectives - General
E	Objectives - Measurable
F	Bibliography
G	Test Included
H	Multimedia
I	Promotional Information
ND	No date on unit
X	Common Core*
Y	Office Core*
Z	Distributive Core*
*	Hard copy available

Descriptors X, Y, and Z are based on the Chart of Competency Modules found on page 4 of the California Business Education Program Guide for Office and Distributive Occupations, 1973. Titles having one or more of these descriptors are considered to be appropriate for use in the respective competency module.

When hard copy is available, the ID title will have an asterisk (*) as a descriptor.

Code categories BEDDS materials

04. Distributive Occupations

04.00	Distributive Core	04.08	General Merchandising
04.06	Food Distribution	04.16	Petroleum

14. Office Occupations

14.00	Office Core	14.07	Stenographic, Secretarial
14.01	Accounting and Computing	14.09	Typing and Related
14.02	Business Data Processing Systems	14.10	Office Simulation
14.03	Filing, Office Machines and General Office Clerical		

77. Youth Organizations

77.01	Distributive Education Clubs of America (DECA)	77.02	Future Business Leaders of America (FBLA)

88. Basic Business

88.00	General Topics	88.03	Consumer Education
88.01	Business Law	88.99	Other
88.02	Economics		

99. Miscellaneous

99.00	General Topics	99.10	Promotional Brochures
99.01	Business Mathematics	99.20	Disadvantaged
99.02	Business Communications	99.30	Multimedia
99.03	Human Relations	99.40	Tutorial
99.04	Work Experience		

Important Note

The documents in the system have been printed exactly as received from the person or organization originating it. Points of view or opinions stated do not necessarily represent official State Department of Education position or policy.

APPENDIX C

A BEDDS-2 FORM

Business Education Data Dissemination System (BEDDS)

ORDER SHEET FOR INDIVIDUAL UNITS BY SCHOOL

(Limit - 10 microfiche titles or 5 hard copy titles;
or a combination of 5 microfiche and 5 hard copy titles
per school per order)

Requested from: Vocational Education Resource
Information Center
Vocational Education Section
721 Capitol Mall
Sacramento, CA 95814

Date ____________________

Requested by: ________________________________
Business Education Department Chairman

____
School

____
Address

____
City, State, Zip County

____
Area Code, Phone

ED or ID #	TITLE	Check for Hard Copy	Check for Microfiche

- - - - - - - - - - - - - - - - For Office Use by- - - - - - - - - - - - - - - -
Vocational Education Resource Information Center

Date mailed ____________________

Units back ordered ____________________
ED or ID #

____
ED or ID #

____
ED or ID #

____
ED or ID #

Copy sent to regional office ____________
date

cc: ___ Oakland Regional Office
___ L. A. Regional Office
___ Sacramento Regional Office

BEDDS-2

APPENDIX D

SUMMARY OF THE CALIFORNIA BUSINESS EDUCATION PROGRAM

PREFACE

There has long existed a need to develop a new structure within which office and distributive education could continue to prosper. The changing nature of the occupations for which we prepare our students, coupled with advances in educational technologies, makes the development of new frameworks both necessary and possible at this time.

The Bureau of Business Education, in acknowledging its mission to provide programs for use in California schools, undertook a major curriculum development project. This document represents the second draft of that effort. The office and distributive education programs in the schools of California should always reflect the changing needs of the employment community. Consequently, this curriculum project is an ongoing one which should never be considered a completed program. It is the intention of the Bureau to continually revise, update, and add to this new curriculum framework.

This significant achievement was made possible only through the efforts of a group of California business educators who gave tirelessly of their time and talents. The future success of this program should be attributed to them.

Task Force Members

Dr. Lois A. Callahan, Manager
College of San Mateo
San Mateo, California

Mr. Joseph Bouchard
Yuba City High School
Yuba City, California

Mr. Charles Buckton
Redwood High School
Visalia, California

Mr. Thomas Clark
Trinity High School
Weaverville, California

Mrs. Kay Cosby
ABC Adult School
Artesia, California

Mrs. Joan Goria
Skyline High School
Oakland, California

Mr. Robert Harr
Distributive Education-
Retail ROP
Monterey, California

Mrs. Eleanor Hays
Sunny Hills High School
Fullerton, California

Mrs. Fawn Jeffers
Santa Barbara High School
Santa Barbara, California

Mr. Robert McGinness
Emil R. Buchser High School
Santa Clara, California

Mr. Charles Priest
San Mateo County R.T.P.
Redwood City, California

Mr. Terrence F. Rieger
Lassen High School
Susanville, California

Mr. R. Conway Spitler
Canyon High School
Saugus, California

Mrs. June Terzich
Ravenswood High School
East Palo Alto, California

Mr. Donald Tingley
Aragon High School
San Mateo, California

Mrs. Betty Trempe
Burroughs Senior High School
Burbank, California

Mrs. Lynda Veatch
Claremont High School
Claremont, California

November, 1973

Consultants

Dr. Ray Banducci, Chairman of
Administration and Counselor
Education
California State University, Sacramento
Sacramento, California

Miss Lorraine Furtado, Teacher Educator
Michigan State University
East Lansing, Michigan

Dr. Gary R. Smith, Teacher Educator
Brigham Young University
Provo, Utah

Mr. Arthur M. Suchesk, Manager
Instructional Media and Systems Division
Southern California Regional Occupational Center
Torrance, California

Samuel L. Barrett
State Director of Vocational
Education and Assistant
Superintendent of Public
Instruction

Richard S. Nelson, Chief
Program Operation Unit

Brenton R. Aikin, Chief
Bureau of Business Education

CALIFORNIA BUSINESS EDUCATION PROGRAM GUIDE FOR OFFICE AND DISTRIBUTIVE OCCUPATIONS

Purpose

To assist distributive and office education teachers of secondary and adult students in reappraising and updating the business education curriculum, the California State Department of Education, Bureau of Business Education, sponsored a Task Force which developed guidelines for a unified office and distributive education training program. To provide students with entry-level job competencies (skills, attitudes and knowledges) compatible with the needs of employers, the program was based upon identifiable competencies required for a cluster of distributive and office occupations rather than upon traditional courses. The system for managing the program was designed as a tool so that the transition from courses to competency-based instruction could be made with relative ease by teachers who work in a variety of school settings. The program includes student-oriented performance objectives and a number of optional approaches to instruction for the following:

1. Competencies common to both distributive and office occupations
2. An office core and a distributive core of competencies
3. Competencies for selected entry-level office and distributive occupations.

Tests and instructional checklists have been prepared for the competency modules.

Rationale

Seven occupations were selected for this study: General Office Clerk; Clerk-Typist; Stenographer; Salesperson, General; Checker-Cashier; Service Station Attendant; and Waiter-Waitress. These were chosen because they represented entry-level employment opportunities that are readily available to students completing office and distributive education programs. An investigation of task analysis studies determined those competencies needed by entry-level employees in the performance of their work. The need-to-know competencies included in this guide were based upon the following major studies:

Crawford, Lucy - A Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education; (ED 032 382 -- ED 032 911) Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

Davis, Gene and Smith, Art - Cooperative Occupational Survey -- Skills Identified with the Clerical and Sales Job Fields; Riverside, California.

Erickson, Lawrence W. - Basic Components of Office Work -- An Analysis of 300 Office Jobs; University of California, Los Angeles.

Ertell, Ken - Clusters of Tasks Performed by Merchandising Employees Working in Three Standard Classifications of Retail Establishments; (ED 023 911) University of Idaho, Moscow, Idaho.

Kallaus, Norman F. - Hiring Standards and Job Opportunities for Beginning Office Workers; University of Iowa, Iowa City, Iowa.

Perkins, Edward, et al.- Clusters of Tasks Associated with the Performance of Major Types of Office Work; Washington State University, Pullman, Washington.

The USOE classifications from *Vocational Education and Occupations*, the *Dictionary of Occupational Titles* and the *Occupational Outlook Handbook* were used for job descriptions. Inquiries were addressed to all county and major city government employers in California as well as many large enterprises which had been involved in the measurement of office work. Studies by the Human Resources Research Organization, Xerox, and Standard Oil of California were among those used to assist in further establishing standards of performance in the office occupation clusters.

Procedures

Based upon this data, the Task Force prepared minimum performance objectives for a sequence within each of the competency modules determined as necessary for entry-level employment. Available educational resources were searched, including Educational Research Information Center and Business Education Data Dissemination System, in an attempt to identify instructional strategies that would develop requisite competencies.

Limitations

The Guide was limited by including only seven of the multitudinous occupations which fall within the office and distributive occupational clusters. In addition, technologies which cut across other vocational areas cannot be effectively taught in isolation (i.e., competencies for some jobs such as service station attendant need to be taught in conjunction with other disciplines which were not represented in this project). Educational expertise such as counseling and guidance, tests and measurements must also be applied to the program. This guide was concerned only with need-to-know entry-level skills, attitudes and knowledges; however, it is fully recognized that these competencies do not encompass a complete business education program. Lastly, no attempt was made to identify and list all of the possible objectives and strategies. This guide represents a statement which will need continual validation, revision and expansion.

PROGRAM MODEL

The model was prepared to give an overview of the California Business Education Program for Office and Distributive Occupations. It shows that competencies common to both the distributive and office entry-level occupations have been identified. This concept is significant because it provides a foundation for job flexibility. The office core competencies are those which were identified as being common to the three selected office jobs: General Office Clerk; Clerk-Typist; and Stenographer. The distributive core competencies are those which were identified as being common to all four selected distributive jobs: Checker-Cashier; Salesperson, General; Service Station Attendant; and Waiter-Waitress. The model presents the concept that specialty competencies have been identified for each of the selected jobs in both the office and distributive components. No hierarchy was found in the distributive jobs, whereas the stenographer must obtain competence in the general office clerk and clerk-typist jobs, plus specialty competence for stenographer.

The Task Force recognized that individual guidance and preparation for the role of consumer are integral components of a total program; however, the constraints of this occupational study did not provide for the incorporation of these two vital aspects. Youth groups were noted for their importance to occupational training. Because it is imperative that individuals being trained for entry-level employment develop proper attitudes and know how to work with other people, human relations was flagged within the confines of the model to indicate the need for continuous attention to that subject area in addition to the suggestions in the study.

PROGRAM MODEL FOR OFFICE / DISTRIBUTIVE OCCUPATIONS

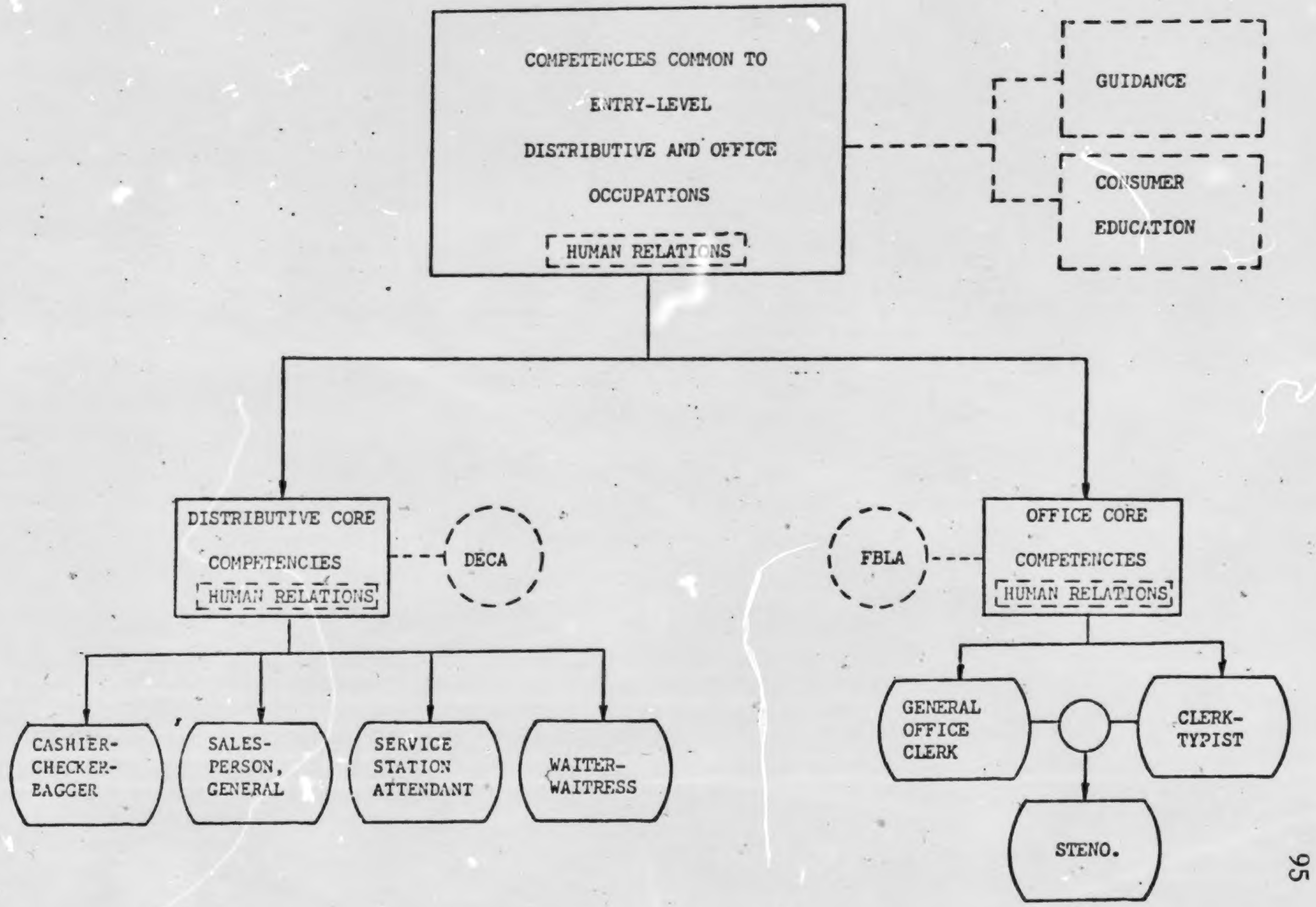
COMPETENCIES COMMON TO ENTRY-LEVEL DISTRIBUTIVE AND OFFICE OCCUPATIONS
HUMAN RELATIONS
GUIDANCE
CONSUMER EDUCATION
DISTRIBUTIVE CORE COMPETENCIES
HUMAN RELATIONS
DECA
FBLA
OFFICE CORE COMPETENCIES
HUMAN RELATIONS
CASHIER-CHECKER-BAGGER
SALES-PERSON, GENERAL
SERVICE STATION ATTENDANT
WAITER-WAITRESS
GENERAL OFFICE CLERK
CLERK-TYPIST
STENO.

CHART OF COMPETENCY MODULES

100. COMMON CORE
    101. Adding Machine
    102. Data Processing
    103. Grooming
    104. Handwriting
    105. Instructions
    106. Job Application
    107. Making Change
    108. Math Computations
    109. Oral Communication
    110. References, Manuals, Directories, Catalogs
    111. Simple Business Records
    112. Sorting, Checking, Verifying
    113. Spelling
    114. Telephone
    115. Working with People
    116. Written Communication

200. OFFICE CORE
    201. Duplicating
    202. Filing and Retrieving
    203. Mail (Incoming and Outgoing)
    204. Petty Cash
    205. Spelling
    206. Typing
    207. Working with People
    208. Written Communication

300. GENERAL OFFICE CLERK
    301. Adding Machine
    302. Filing and Retrieving
    303. Mail (Incoming and Outgoing)
    304. References, Manuals, Directories, Catalogs
    305. Simple Business Records
    306. Telephone

400. CLERK-TYPIST
    401. Spelling
    402. Typing
    403. Written Communication

500. STENOGRAPHER
    501. Spelling
    502. Typing and Transcribing
    503. Written Communication

600. ADDITIONAL OCCUPATIONS

700. ADDITIONAL OCCUPATIONS

800. DISTRIBUTIVE CORE
    Orientation
    801. Careers in Marketing
    802. Marketing in Our Economy

    Competencies
    803. Basic Sales Techniques
    804. Cashiering (Cash Register and Sales Records)
    805. Communication
    806. Customer Services
    807. Employer-Employee-Customer Relations
    808. Sales Promotion
    809. Stockkeeping and Inventory Control

    Specialties
    810. Advertising
    811. Creative Selling
    812. Display

900. DISTRIBUTIVE OCCUPATIONS
    901. Cashier-Checker-Bagger
    902. Salesperson, General
    903. Service Station Attendant
    904. Waiter-Waitress

NUMERICAL SYSTEM

A system has been devised to identify the components of the competency modules included in the program guide.

Following is an explanation of the numerical system:

Code		Identifies
000		Program Level
		Competency Module
.01		Performance Objective
	.00	Objective Number
.02		Instructional Ideas
.03		Pretest
.04		Posttest
.05		Learning Activity Materials

Example:

101		Common Core
		Adding Machine
.01		Performance Objectives
	01	Add, Subtract, Multiply
.02		Instructional Ideas
.03		Pretest
.04		Posttest
.05		Learning Activity Materials

NUMERICAL SYSTEM

100.00.00 COMMON CORE COMPETENCIES

- 101.00.00 ADDING MACHINE
  - .01 Performance Objectives
    - .01 Add, Subtract, Multiply
    - .02 Sub and Grand Total
    - .03 Decimal Placement
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 102.00.00 DATA PROCESSING
  - .01 Performance Objectives
    - .01 Terms
    - .02 Punched Card
    - .03 Printout
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 103.00.00 GROOMING
  - .01 Performance Objectives
    - .01 Inventory
    - .02 Clothing Styles
    - .03 Stress Situation
    - .04 Regulations
    - .05 Dress
    - .06 Facial-Hair Style
    - .07 Grooming Plan
    - .08 Health Plan
    - .09 Complexion
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 104.00.00 HANDWRITING
  - .01 Performance Objectives
    - .01 Legibility Factors
    - .02 Print and/or Cursive
    - .03 Business Forms
    - .04 Application Form
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 105.00.00 INSTRUCTIONS
  - .01 Performance Objectives
    - .01 Identify Missing Elements
    - .02 True and False
    - .03 Record Numbers, Symbols
    - .04 Written Follow-up
    - .05 Oral Follow-up
    - .06 Remember and Repeat
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 106.00.00 JOB APPLICATION
  - .01 Performance Objectives
    - .01 Vocabulary
    - .02 Social Security
    - .03 W-4 Form
    - .04 Employment Test
    - .05 Resume or Data Sheet
    - .06 Application Letter
    - .07 Application Forms
    - .08 Interview Questions
    - .09 Appointment, Telephone
    - .10 Simulate an Interview, Post-Interview Critique
    - .11 Follow-up Letters
    - .12 Payroll Voucher Terms
    - .13 Deductions
    - .14 Endorsement

NUMERICAL SYSTEM (continued)

100.00.00 COMMON CORE COMPETENCIES (continued)

106.00.00 JOB APPLICATION (continued)
.02 Instructional Ideas
.03 Pretest
.04 Posttest
.05 Learning Activity Materials

107.00.00 MAKING CHANGE
.01 Performance Objectives
.01 Set Up Cash Fund
.02 Handle Transaction
.03 Balance Cash
.02 Instructional Ideas
.03 Pretest
.04 Posttest
.05 Learning Activity Materials

108.00.00 MATH COMPUTATIONS
.01 Performance Objectives
.01 Add Whole Numbers
.02 Subtract Whole Numbers
.03 Multiply Whole Numbers
.04 Divide Whole Numbers
.05 Decimal Numbers
.06 Convert Common Fractions to Decimal Numbers
.07 Reduce Fractions to Lowest Terms
.08 Common Fractions
.09 Combinations of Whole, Decimal, Common Fraction
.10 Round-off Decimals to 1, 2, 3 Places
.11 Convert Fractions and Decimals
.12 Count and Record Information
.13 Read and Record Information from Table
.14 Convert Percent to Decimal, Decimal to Percent
.15 Multiply and Divide Basic Percentage Problems
.16 Measurements
.17 Weights

108.00.00 MATH COMPUTATIONS (continued)
.02 Instructional Ideas
.03 Pretest
.04 Posttest
.05 Learning Activity Materials

109.00.00 ORAL COMMUNICATION
.01 Performance Objectives
.01 Converse Spontaneously
.02 Recognize, Interpret, Recall, Ideas, Questions and Directions
.03 Answer and Ask Questions, Make Requests
.02 Instructional Ideas
.03 Pretest
.04 Posttest
.05 Learning Activity Materials

110.00.00 REFERENCES, MANUALS DIRECTORIES, CATALOGS
.01 Performance Objectives
.01 Reference Questions
.02 Dictionary
.03 Abbreviations
.04 Telephone Directory
.05 Telephone Directory
.06 Telephone Directory
.07 City Directory
.08 City Directory
.09 Zip Code Directory
.10 Company Directory
.11 Employee Handbook
.12 Catalog
.13 California Road Map
.02 Instructional Ideas
.03 Pretest
.04 Posttest
.05 Learning Activity Materials

NUMERICAL SYSTEM (continued)

100.00.00 COMMON CORE COMPETENCIES (continued)

111.00.00 SIMPLE BUSINESS RECORDS
- .01 Performance Objectives
  - .01 Telephone Messages
  - .02 Sales Receipts - Tally Sheet
  - .03 Bank Deposit Slip - Daily Cash Tally
  - .04 Inventory Control Sheet - Tally - Requisition Form
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

112.00.00 SORTING, CHECKING, VERIFYING
- .01 Performance Objectives
  - .01 Match and Sort by Number, Letter, Color
  - .02 Check and Compare Names
  - .03 Check and Compare Numbers
  - .04 Check and Compare Names, Numbers
  - .05 Copy in Specific Order
  - .06 Sort Alphabetically
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

113.00.00 SPELLING
- .01 Performance Objectives
  - .01 Commonly Used Words by Rules, by Error Patterns, Proofread for Errors
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

114.00.00 TELEPHONE
- .01 Performance Objectives
  - .01 Respond Spontaneously
  - .02 Answer Incoming Calls
  - .03 Place Outgoing Calls
  - .04 Pushbutton Phone Calls
  - .05 Pushbutton Phone Calls
  - .06 Incoming Long Distance Calls
  - .07 Outgoing Long Distance Calls
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

115.00.00 WORKING WITH PEOPLE
- .01 Performance Objectives
  - .01 Problem-Solving Distress Situations
  - .02 Identify and Rate Strengths and Weaknesses
  - .03 Improvement Plan
  - .04 Follow-up Rating
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

116.00.00 WRITTEN COMMUNICATION
- .01 Performance Objectives
  - .01 Incomplete Sentences
  - .02 Complete Sentences
  - .03 Incorrect Word Usage
  - .04 Punctuation
  - .05 Capitalization
  - .06 Composition
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

NUMERICAL SYSTEM (continued)

200.00.00 OFFICE CORE COMPETENCIES

- 201.00.00 DUPLICATING
  - .01 Performance Objectives
    - .01 Fluid Duplicator
    - .02 Offset Printer
    - .03 Photocopier
    - .04 Mimeograph Machine
    - .05 Thermal Copier
    - .06 Paper Cutter
    - .07 Paper Punch
    - .08 Collate and Staple
    - .09 Loading Stapler
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 202.00.00 FILING AND RETRIEVING
  - .01 Performance Objectives
    - .01 Arrange by Alphabet, Numbers
    - .02 File Alphabetically
    - .03 Retrieve, Checkout and Record
    - .04 File Numerically
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 203.00.00 MAIL - PROCESS
  - .01 Performance Objectives
    - .01 Incoming Mail
    - .02 Outgoing Mail
    - .03 Interoffice Mail
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 204.00.00 PETTY CASH
  - .01 Performance Objectives
    - .01 Establish, Maintain and Replenish
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 205.00.00 SPELLING
  - .01 Performance Objectives
    - .01 Commonly Used Business Words by Error Patterns
    - .02 Recognition of Misspellings
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 206.00.00 TYPING
  - .01 Performance Objectives
    - .01 Touch Type - 40/8 Errors
    - .02 Machine Control
    - .03 Locate, Mark Errors
    - .04 Correction Aids
    - .05 Rough Draft
    - .06 Divide Words
    - .07 Carbon Copies
    - .08 Work Station Care
    - .09 Cards
    - .10 Labels
    - .11 Letters
    - .12 Envelopes
    - .13 Memos
    - .14 Fold and Insert Documents
    - .15 Manuscript
    - .16 Forms
    - .17 Duplicator Masterset
    - .18 Thermal Copy Preparation
    - .19 Photocopy Preparation

NUMERICAL SYSTEM (continued)

200.00.00 OFFICE CORE COMPETENCIES (continued)

206.00.00 TYPING (continued)
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

207.00.00 WORKING WITH PEOPLE
- .01 Performance Objectives
  - .01 Employer/Employee
  - .02 Employee/Public
  - .03 Employee/Subordinate
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

208.00.00 WRITTEN COMMUNICATION
- .01 Performance Objectives
  - .01 Paragraphing
  - .02 Punctuation
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

300.00.00 GENERAL OFFICE CLERK COMPETENCIES

301.00.00 ADDING MACHINE
- .01 Performance Objectives
  - .01 Add, Subtract, Multiply
  - .02 Credit Balance
  - .03 Fractions to Decimals
  - .04 Multiply Decimals
  - .05 Percent
  - .06 Combination

301.00.00 ADDING MACHINE (continued)
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

302.00.00 FILING AND RETRIEVING
- .01 Performance Objectives
  - .01 Alphabetic
  - .02 Numeric
  - .03 Subject
  - .04 Geographic
  - .05 Follow-up Action
  - .06 Retrieve Folders
  - .07 Code Documents
  - .08 Cross-Reference
  - .09 Prepare Folders
  - .10 Reproduce Copies
  - .11 Checkout
  - .12 Abstract Information
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

303.00.00 MAIL
- .01 Performance Objectives
  - .01 Domestic
  - .02 Parcel Post
  - .03 Fourth Class
  - .04 Package - Prepare
  - .05 Special Handling
  - .06 International Mail
  - .07 Incoming
  - .08 Outgoing
  - .09 Interoffice
  - .10 Envelopes
  - .11 Mail List

NUMERICAL SYSTEM (continued)

300.00.00 GENERAL OFFICE CLERK COMPETENCIES (continued)

303.00.00 MAIL (continued)
  .02 Instructional Ideas
  .03 Pretest
  .04 Posttest
  .05 Learning Activity Materials

304.00.00 REFERENCES, MANUALS, DIRECTORIES, CATALOGS
  .01 Performance Objectives
    .01 Handbook
    .02 Almanac
    .03 Hotel-Motel Directory
    .04 Thesaurus
    .05 Atlas
  .02 Instructional Ideas
  .03 Pretest
  .04 Posttest
  .05 Learning Activity Materials

305.00.00 SIMPLE BUSINESS RECORDS
  .01 Performance Objectives
    .01 Bank Deposit
    .02 Sales Slip
    .03 Time Cards
    .04 Stock Records - Incoming
    .05 Stock Records - Outgoing
  .02 Instructional Ideas
  .03 Pretest
  .04 Posttest
  .05 Learning Activity Materials

306.00.00 TELEPHONE
  .01 Performance Objectives
    .01 Switchboard/Call Director Operation
  .02 Instructional Ideas
  .03 Pretest
  .04 Posttest
  .05 Learning Activity Materials

400.00.00 CLERK TYPIST COMPETENCIES

401.00.00 SPELLING
  .01 Performance Objectives
    .01 Common Business Words by Error Patterns
    .02 Recognition of Misspellings
  .02 Instructional Ideas
  .03 Pretest
  .04 Posttest
  .05 Learning Activity Materials

402.00.00 TYPING
  .01 Performance Objectives
    .01 Touch Type - 40/8 Errors
    .02 Transcribe Rough Draft from Machine
    .03 Error Corrections
    .04 Letter
    .05 Transcribe Letter
    .06 Compose Response Letter
    .07 Outline
    .08 Manuscript
    .09 Minutes of Meeting
    .10 Handwritten Tabulations
    .11 Organize Tabulated Data by Columns, Form
    .12 Financial Statement
    .13 Mimeograph, Stencil
    .14 Offset Master
    .15 Duplicating Master Set
  .02 Instructional Ideas
  .03 Pretest
  .04 Posttest
  .05 Learning Activity Materials

403.00.00 WRITTEN COMMUNICATION
  .01 Performance Objectives
    .01 Composition
  .02 Instructional Ideas
  .03 Pretest
  .04 Posttest
  .05 Learning Activity Materials

NUMERICAL SYSTEM (continued)

500.00.00 STENOGRAPHER COMPETENCIES

- 501.00.00 SPELLING
  - .01 Performance Objectives
    - .01 Business Words by Error Pattern
    - .02 Proofread for Errors
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 502.00.00 TYPING
  - .01 Performance Objectives
    - .01 Touch Type - 50/8 Errors
    - .02 Rough Draft from Dictation Notes
    - .03 Rough Draft from Transcribing Machine
    - .04 Transmittable Letter from Dictation Notes
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 503.00.00 WRITTEN COMMUNICATION
  - .01 Performance Objectives
    - .01 Definitions
    - .02 Word Usage
    - .03 Five C's
    - .04 Editing
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

600.00.00 ADDITIONAL OCCUPATIONS

700.00.00 ADDITIONAL OCCUPATIONS

800.00.00 DISTRIBUTIVE CORE COMPETENCIES

- 801.00.00 CAREERS IN MARKETING
  - .01 Performance Objectives
    - .01 Select Career Area
    - .02 Career Requirements
    - .03 Entry Job Requirements
    - .04 Competency Evaluation
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 802.00.00 MARKETING IN OUR ECONOMY
  - .01 Performance Objectives
    - .01 Price Change Factors
    - .02 Economic/Marketing Trends
    - .03 Channels of Distribution
    - .04 Price-Weight Comparison
    - .05 Business Organizations
    - .06 Marketing System
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 803.00.00 BASIC SALES TECHNIQUES
  - .01 Performance Objectives
    - .01 Approaches
    - .02 Buying Motives
    - .03 Substitution Selling
    - .04 Product Features
    - .05 Customer Benefits
    - .06 Demonstration
    - .07 Objections
    - .08 Closings
    - .09 Suggestion Selling
    - .10 Customer Assurance
    - .11 Sales Demonstration

NUMERICAL SYSTEM (continued)

800.00.00 DISTRIBUTIVE CORE COMPETENCIES (continued)

803.00.00 BASIC SALES TECHNIQUES (continued)
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

804.00.00 CASHIERING (CASH REGISTER & SALES RECORDS)
- .01 Performance Objectives
  - .01 Set Up Till
  - .02 Change Making Steps
  - .03 Cash Register Techniques
  - .04 Qualifying Tests
  - .05 Check Cashing
  - .06 Parts of a Salescheck
  - .07 Completing Saleschecks
  - .08 Charge Card Transactions
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

805.00.00 COMMUNICATION
- .01 Performance Objectives
  - .01 Oral Report
  - .02 Business Language
  - .03 Telephone Techniques
  - .04 Merchandise Description
  - .05 Listening Techniques
  - .06 Instructing Others
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

806.00.00 CUSTOMER SERVICES
- .01 Performance Objectives
  - .01 Cost-Profit Picture
  - .02 Check Authorization
  - .03 Customer Complaints
  - .04 Operational Problems
  - .05 Delivery Services
  - .06 Returns and Exchanges
  - .07 Service Desk Activities
  - .08 Credit Applications
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

807.00.00 EMPLOYER-EMPLOYEE-CUSTOMER RELATIONS
- .01 Performance Objectives
  - .01 Benefits of Good Customer Relations
  - .02 Salesperson Attitudes
  - .03 Dress Standards
  - .04 Solving Customer Problems
  - .05 Customer Relations Principles
  - .06 Demonstrating Attitudes
  - .07 Good Work Habits
  - .08 Co-worker Relations
  - .09 Supervisor Relations
  - .10 Solving Work Problems
- .02 Instructional Ideas
- .03 Pretest
- .04 Posttest
- .05 Learning Activity Materials

800.00.00 DISTRIBUTIVE CORE COMPETENCIES (continued)

- 808.00.00 SALES PROMOTION
  - .01 Performance Objectives
    - .01 Media
    - .02 Promotional Activities
    - .03 Types
    - .04 Kinds of Sales
    - .05 Salesperson's Responsibilities
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 809.00.00 STOCKKEEPING & INVENTORY CONTROL
  - .01 Performance Objectives
    - .01 Inventory Shortages
    - .02 Stockkeeping Practices
    - .03 Safety Rules
    - .04 Inventory Control Reasons
    - .05 Physical Inventory
    - .06 Inventory Data
    - .07 Perpetual Inventory
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 810.00.00 ADVERTISING
  - .01 Performance Objectives
    - .01 Comparative Media
    - .02 Objectives
    - .03 Basic Psychological Wants
    - .04 Secondary Wants
    - .05 Headlines
    - .06 Body Copy
    - .07 Illustrations
    - .08 Logotypes
    - .09 White Space
    - .10 Borders
    - .11 Ad Writing and Layout

- 810.00.00 ADVERTISING (continued)
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 811.00.00 CREATIVE SELLING
  - .01 Performance Objectives
    - .01 Basic Techniques Review
    - .02 Customer Needs
    - .03 Customer Types
    - .04 Buying Decisions
    - .05 Buying Signals
    - .06 Merchandise Questions
    - .07 Agreement Sentences
    - .08 Overcoming Objections
    - .09 Sales Attitude
    - .10 Selling Demonstration
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 812.00.00 DISPLAY
  - .01 Performance Objectives
    - .01 Display Objectives
    - .02 Survey
    - .03 Color
    - .04 Design
    - .05 Types of Displays
    - .06 Building a Display
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

NUMERICAL SYSTEM (continued)

900.00.00 DISTRIBUTIVE OCCUPATIONS COMPETENCIES

- 901.00.00 CHECKER-CASHIER-BAGGER
  - .01 Performance Objectives
    - .01 Work Procedures
    - .02 Taxable Items
    - .03 Store Layout
    - .04 Price Marking
    - .05 Bagging
    - .06 Pricing Produce
    - .07 Grocery Checking
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 902.00.00 SALESPERSON, GENERAL
  - .01 Performance Objectives
    - .01 Work Procedures
    - .02 Closing Procedures
    - .03 Layaway
    - .04 C.O.D.
    - .05 Interpreting Labels
    - .06 Estimating Sizes
    - .07 Wrapping
    - .08 Delivery Dating
    - .09 Unit Control Records
    - .10 Checking and Sizing Price Tags
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 903.00.00 SERVICE STATION ATTENDANT
  - .01 Performance Objectives
    - .01 Work Procedures
    - .02 Customer Impressions
    - .03 Sales Procedures
    - .04 Under the Hood Service
    - .05 Windshield Service
    - .06 Tire Service
    - .07 Credit Card Procedures
    - .08 Last Impressions
    - .09 Extra Services
    - .10 Job Safety
    - .11 Service Station Application
    - .12 Sales Demonstration
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

- 904.00.00 WAITER-WAITRESS
  - .01 Performance Objectives
    - .01 Work Procedures
    - .02 Reasons for Good Service
    - .03 Food Handling Skills
    - .04 Food Merchandising Techniques
    - .05 Service Attitudes
    - .06 Restaurant Terms
    - .07 Operating Requirements
  - .02 Instructional Ideas
  - .03 Pretest
  - .04 Posttest
  - .05 Learning Activity Materials

APPENDIX E

FORMS USED IN THE OPERATION OF THE MOBILE LABORATORY

MAINTENANCE

ate	Location	Maintenance Performed	Mileage	Cost	Covered by Warranty	Not Covered by Warranty

PHONE CALLS

Date	Number Called	Number Called From	Reason

BUREAU OF BUSINESS EDUCATION

Mobile Laboratory for Instructional Materials -- Monthly Mileage Log

Month/Year ______________ Number of Scheduled Sites _____ Total Mileage _____

Date	Departed From	Destination	Speedometer Reading Beginning	Ending	Unit Parked Overnight At
			/		
			/		
			/		
			/		
			/		
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APPENDIX F

THE ANALYSIS WORKSHEET

143 School

Position

INSTRUCTIONS:

1. COMPLETE the information above.
2. To review a lap, place a check mark in the review column. Check only 5 laps at one time.
3. To copy a lap, place a check mark in the copy column.
4. To order a lap, place a check mark in the order column and ask the operator for a special order form and instructions.
5. Return this form and all order forms to the operator before leaving.

	Review	Copy	Order		Review	Copy	Order		Review	Copy	Order		Review	Copy	Order		Review	Copy
[illegible]				123.2				242.18				255.15				258.4				262.2		

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262.13
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263.2
263.12
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264.1
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265.1
265.2
265.5
265.6
265.10
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APPENDIX G

THE QUESTIONNAIRE, COVER LETTER, AND VISITORS' LOG

Name______________________ School______________________
Position______________________ District______________________
Principal business subjects taught______________ ______________
______________ ______________

1. How many teachers are teaching sections of business education in your school? ___

   1.1 How many visited the mobile lab? ___

2. What do you feel is the main reason other teachers in your department did not visit the mobile lab?
   insufficient notice___ lack of interest___ personal conflicts___
   teaching conflicts___ all attended___ other______________

3. Where did you visit the mobile lab?
   special workshop location___ District office___
   your school___ another school___
   college___ other______________

4. Where would you have preferred to have visited the mobile lab?
   ______________ 4.1 Why? ______________

5. What time of day did you visit the mobile lab?
   8:00-9:00___ 9:00-10:00___ 10:00-11:00___ 11:00-12:00___ 12:00-1:00___
   1:00-2:00___ 2:00-3:00___ 3:00-4:00___ 4:00-5:00___ later___

   5.1 Was the time? during regular class hours___ during lunch___
   during prep period___ before school___ after school___

6. What time of day would be the most convenient for you to visit the mobile lab in the future? before school___ during prep period___
   during lunch___ after school___

7. How much time did you spend in the mobile lab?
   [illegible]___ 15 min___ 30 min___ 45 min___ 1 hr___ 1½ hrs___ 2 hr___ more___

8. Who informed you that the mobile lab was available for your use?
   Bureau of Bus. Ed___ District office___ School administrator___
   Dept. chairman___ Another teacher___ other______________

9. How were you notified that the mobile lab was available for your use?
   written notice___ announcement at___ other______________

10. Considering all factors, what do you feel is adequate [illegible] notice?
    [illegible]___ 4 days___ 5 days___ 1 wk___ 10 days___ 2 wks___

11. If at some future time, the mobile lab was scheduled in your school between the hours of 8:00-12:00, how much time could you spend in the mobile lab?
    none___ 15 min___ 30 min___ 45 min___ 1 hr___ 1½ hrs___ 2 hrs___ more___

12. If at some future time, the mobile lab were scheduled in your school between the hours of 1:00-5:00, how much time could you spend in the mobile lab?
    none___ 15 min___ 30 min___ 45 min___ 1 hr___ 1½ hrs___ 2 hrs___ more___

13. How many teachers were in the mobile lab, at the most, at one time, while you were in the mobile lab?
1___ 2___ 3___ 4___ 5___ 6___ 7___ 8___ 9___ 10___ more___

13.1 How many teachers, do you feel, can effectively work in the mobile lab at one time?
2___ 3___ 4___ 5___ 6___ 7___ 8___ 9___ 10___ more___

14. How will the laps you received be used?
resource information___ to implement the state CBE program___
individual instruction___ other________________________

15. What other instructional materials or media do you feel the mobile lab could provide business educators in the state? ______________________
____
____

16. In what instructional areas of business education do you feel other LAPs should be developed? ______________ ______________
______________ ______________ ______________

17. For what competencies do you feel additional laps should be developed? ______________ ______________ ______________
______________ ______________ ______________

Place a check mark in either the yes or no column.

	YES	NO
18. Were you required to visit the mobile lab?	___	___
19. Were you allowed any released time for the visit?	___	___
20. Were you aware that the IEDDS materials could previously have been ordered from the Vocational Education Resource Information Center?	___	___
21. Were you familiar with the IEDDS system before visiting the mobile laboratory?	___	___
22. Have you ever ordered LAPs directly through the IEDDS catalog?	___	___
23. Did you review the IEDDS catalog before visiting the mobile laboratory?	___	___
24. Would you have ordered LAPs if you had not visited the mobile lab?	___	___
25. Was it beneficial to preview the LAPs before duplicating or ordering the LAPs?	___	___

Please make any other comments that you feel would be beneficial to the operation of the mobile lab. ______________________
____
____
____
____
____

18231 Vanowen
Reseda, California
April 2, 1974

Dear Instructor

In my capacity as the mobile unit operator, I must provide the Bureau of Business Education with relevant data with which the Bureau can measure the effectiveness of the mobile Business Education Instructional Materials Laboratory. As part of my Master's thesis at California State University, Los Angeles, I am attempting to determine a set of operational procedures for (1) scheduling of, and (2) material dissemination within, the mobile laboratory. In addition, I am attempting to determine other needs of business educators that could possibly be met through the mobile laboratory.

Since you, as a business educator, have visited the mobile laboratory, your responses to the enclosed questionnaire will be of great value in my study.

The success of this study is dependent upon your cooperation. Please complete the questionnaire and return it in the self-addressed, stamped envelope.

Cordially yours

Dennis Siggins

Dennis Siggins

Enclosures

BUREAU OF BUSINESS EDUCATION

Mobile Laboratory for Instructional Materials -- Visitors' Log

Date: ______________________

Name	School	Position

APPENDIX H

TABLE 21

Table 21

Total Number of Reviews, Reproductions, and Orders of the BEDDS Learning Activity Packets during the Three-Month Period of Data Collection

LAP number	Title or competency	Number of times			
		Reviewed	Copied	Ordered	Percent[a]
102	FBLA handbook	5	0	4	80
102.1	Merits of FBLA	6	3	1	67
102.2	FBLA workshop	5	3	1	80
102.3	FBLA chapter report 1971-1972	5	1	0	20
102.4	FBLA publicizes Caruthers	5	3	0	60
103	Articulation--data processing	16	2	5	44
103.1	Operating a card punch	12	2	4	50
103.2	Sorting	20	5	3	40
104.1	Fractions	28	10	7	61
104.2	Math placement test	32	10	20	94
105	Business education department promotion	3	2	1	100
106	Using sources of information	15	3	6	60
106.1	Spelling	44	12	15	61
106.2	Using sources of information	15	3	2	33
106.3	Spelling	38	16	6	58
106.4	Word discrimination	24	11	9	83
107	Insurance	21	3	12	67
107.1	Keeping personal records	32	9	11	38
107.2	General business--teacher outline	22	0	12	55
107.3	The business contract	25	7	16	92
107.4	Checking	33	11	12	70
108	Economics, consumer view	32	8	3	34
117	Business forms	43	7	14	49

[a] Percentage of times that the LAPs reviewed were copied and/or ordered.

Table 21 (continued)

LAP number	Title or competency	Number of times			
		Reviewed	Copied	Ordered	Percent[a]
117.1	Extensions	24	7	4	46
117.2	Payroll clerk	22	4	2	27
117.3	Payroll clerk guidelines	17	5	2	41
118	Advertising	20	7	9	80
118.1	Distributive education progress report	12	5	3	67
118.2	Distributive education training agreement	13	7	3	77
118.3	Cooperative distributive education application	14	11	0	79
118.4	Checker-clerk objectives	35	11	5	46
118.5	Receiving clerk	17	10	1	65
118.6	Sales clerk	32	18	8	81
118.7	Sales clerk	27	18	5	85
118.8	Shipping clerk	14	9	0	64
118.9	Display clerk	19	14	1	79
118.10	Salesman	32	22	5	84
118.11	Display clerk	14	12	0	86
118.12	Checker-cashier	27	14	5	70
118.13	Cashiering	29	14	3	59
119	Distributive education preparation plan	21	7	7	67
119.1	Food clerk-waiter-waitress	15	8	2	67
121	Office occupation program	86	10	47	66
121.1	Duplicating machine operator	39	7	6	33
121.2	Calculator machine operator	26	5	4	35
121.3	Automatic calculator operator	16	3	3	38
121.4	Telephone clerk	41	9	6	37
121.5	Employment readiness tasks	25	8	6	56
121.6	Printing calculator operator	21	5	3	38
121.7	Clerical cashier	16	3	3	38
121.8	Liquid duplicator operator	31	4	2	19
121.9	Mimeograph operator	38	6	6	32
121.10	Filing clerk	35	5	4	26

Table 21 (continued)

LAP number	Title or competency	Number of times			
		Reviewed	Copied	Ordered	Percent^a
121.11	Receptionist	38	7	6	34
121.12	Clerical practice	39	7	12	49
121.13	Ten-key adding machine	43	10	5	35
121.15	Duplicating machine operator	34	8	5	38
121.16	Offset duplicating	24	9	6	63
122	Transcriber guidelines	17	6	5	65
123	Preparing original correspondence	33	7	12	58
123.1	Typing image master	14	3	5	57
123.2	Typing I	37	10	16	70
123.3	Typist	15	2	3	33
123.4	Statistical typing clerk	8	1	0	12
123.5	Data process--clerk typist	9	0	5	56
123.6	Core typing	41	15	13	68
123.7	Typing memory spheres	35	7	9	46
123.8	Preparing a one-color stencil	18	7	3	56
123.9	Carbon paper	17	7	1	47
124	Audio visual--Dictionary of Occupational Titles	0	0	0	0
125	Tutorial program in business education	3	1	1	66
238	Addressing an envelope	37	7	17	65
238.1	Typing a fluid master	22	6	11	77
238.2	Typing footnotes	23	5	11	70
238.3	Typing on OCR computer	11	1	6	64
238.4	Simple beginning manuscript	11	5	3	73
238.5	Typing review	40	4	31	88
238.6	Speed and accuracy typing	55	8	42	91
238.7	Business letters	26	4	10	54
238.8	Tabulations	27	5	14	70
238.9	Magnetic tape Selectric typewriter (MT/ST)	12	1	8	75
238.10	Type and run a stencil	27	4	12	59
238.11	Typing the alphabet	23	7	9	70

Table 21 (continued)

LAP number	Title or competency	Number of times Reviewed	Number of times Copied	Number of times Ordered	Percent[a]
238. 12	Typing index cards, envelopes	16	4	6	63
238. 14	Advanced tabulation	14	3	5	57
238. 15	Typing simple tables	6	1	1	33
238. 16	Tabulations	13	3	5	62
238. 17	Horizontal and vertical centering	32	3	9	38
238. 19	Tabulation	6	1	4	83
238. 20	Typing long reports	9	3	3	67
238. 21	Typing a stencil	14	3	1	29
238. 22	Typing form letters	9	2	1	33
238. 23	IBM Executive typewriter	41	12	16	68
238. 24	Modified block style	14	4	4	57
238. 25	Business letters--electric	14	2	5	50
238. 26	Form letter--MT/ST	9	2	2	44
239	Trial balance errors	32	5	19	75
239. 1	No errors in payroll	40	7	19	65
239. 2	Statement reconciliation	[illegible]	12	40	85
239. 3	Eight-column worksheet	[illegible]	8	7	83
239. 4	Introduction to accounts payable	22	3	6	41
240. 1	Data processing program	14	3	6	64
240. 2	Reading a punched card	24	8	8	67
240. 3	Data processing program	22	4	12	73
240. 4	Time handling	6	0	1	17
241	Phonics/Gregg shorthand	3	0	2	67
241. 1	Machine transcription	5	0	4	80
241. 2	Machine shorthand	0	0	0	0
242	Project in recordkeeping	28	3	12	54
242. 1	Ten-key adding machine	30	3	5	27
242. 2	Intensified program	25	0	11	44
242. 3	Shorthand	52	4	33	71
242. 4	Financial duties/secretary	53	11	29	75
242. 5	Zip code directory	38	16	9	66

Table 21 (continued)

LAP number	Title or competency	Number of times			
		Reviewed	Copied	Ordered	Percent[a]
242.6	Telephone techniques	57	24	15	68
242.7	Filing	37	11	11	59
242.9	Adding machine	16	4	2	38
242.10	Ten-key adding machine	13	2	1	23
242.11	Zip code directory	34	10	14	71
242.12	Decimals on ten-key	33	13	7	61
242.13	Push button telephone	29	12	9	72
242.14	IBM transcriber	32	6	11	53
242.15	Fluid duplicating machine	21	6	5	52
242.16	Electronic calculator	30	9	8	57
242.17	Telephone directory	39	10	15	64
242.18	Classes of mail	33	9	13	67
242.19	Multiplication, ten-key	17	2	4	35
242.20	Alphabetic filing	26	9	12	81
242.21	Learning about checks	43	6	24	70
242.23	Recordkeeping I	16	4	4	50
242.24	Obtaining an office job	60	3	34	62
242.25	Addressing envelopes	22	4	5	41
242.27	Telephone directory	46	21	8	63
242.28	Office occupations lab	9	0	6	67
242.30	Office simulation demonstration	14	1	7	57
242.31	Office simulation demonstration	15	1	9	67
244	Restaurant guest check	11	1	4	45
245	Retail merchandising	31	5	14	61
245.1	Cash register unit	50	12	20	64
246	General business content	4	0	4	100
247	Bill of sale	33	5	7	36
247.1	California court system	29	7	12	66
248	Economics in business	6	0	1	17
249	Handwriting improvement	31	12	1	42
249.1	Job interview	41	8	6	34
249.2	Job application	48	10	4	29

Table 21 (continued)

LAP number	Title or competency	Number of times			
		Reviewed	Copied	Ordered	Percent[a]
249.3	How to apply for a job	65	23	26	75
249.4	Performance objectives	20	5	6	55
249.5	Letter of application	40	14	16	75
249.6	Job application	28	8	7	54
249.7	Preparing for the interview	36	6	7	36
249.9	Zip code directory	12	1	6	58
251.1	Preparing a speech	14	8	6	100
252	Office occupations program	16	2	9	56
253	Office occupation demonstration	9	0	6	67
254	Merchandise pricing	11	6	1	64
254.1	An advertising layout	25	6	11	68
254.2	Making change	50	20	9	58
254.3	Windsor knot	12	5	7	100
254.4	Selling	28	10	2	43
254.5	Checker-cashier	34	6	6	35
254.6	Advertising	22	6	5	50
254.7	Sales demonstration	19	6	3	47
254.8	Handling money	45	11	19	67
254.9	Student store handbook	25	0	18	72
254.10	Distributive education evaluation instruments	13	8	3	85
254.11	Student store handbook	22	0	10	45
254.12	Closing the sale	17	6	4	59
254.13	Making change	45	15	13	62
254.14	Merchandising math	24	6	11	71
255	Calculating depreciation	26	6	7	50
255.1	Teller's batch sheet	10	1	0	10
255.2	Petty cash fund	26	6	3	35
255.3	The balance sheet	11	1	4	45
255.4	Bookkeeping	25	0	13	52
255.5	Introduction to data processing	42	14	11	60
255.6	Quarter plan in bookkeeping	19	6	9	79

Table 21 (continued)

LAP number	Title or competency	Number of times			
		Reviewed	Copied	Ordered	Percent[a]
255.7	Quarter plan in bookkeeping	15	5	7	80
255.8	Quarter plan in bookkeeping	15	5	7	80
255.9	Intermediate BASIC	19	4	4	42
255.10	Advanced BASIC	14	3	3	43
255.11	Computers--how they work	19	4	3	37
255.12	Basic BASIC	20	5	7	60
255.13	Careers in bookkeeping	32	3	13	50
255.14	The payroll	19	6	5	58
255.15	Data processing	36	6	12	50
256	555-cord switchboard	13	4	5	69
256.1	Telephone directory	25	6	4	40
256.2	Multiplication on ten-key	8	0	2	25
256.3	Zip code directory	18	3	2	28
256.4	PBX skill development	11	3	3	55
256.5	Ten-key printing calculator	11	1	2	27
256.6	The voice transcriber	14	4	4	57
256.7	PBX skill unit	9	3	1	44
256.8	Taking incoming calls	25	4	5	36
256.9	Materials for the telephone	19	6	2	42
256.10	Ten-key adding listing	11	1	1	18
256.11	Numerical filing	17	3	2	29
256.12	Key driven calculator	4	0	0	0
256.13	Telephone courtesy	32	8	10	56
256.14	Proofreading	51	10	15	49
256.15	Rotary adding machine	6	1	0	17
256.16	Business letters	37	5	10	41
256.17	Computing chain discounts	18	5	9	77
256.18	Use of reference materials	34	4	23	79
256.19	Advanced filing	18	7	5	67
256.20	Business records	15	6	4	67
256.21	Advanced adding machines	10	2	2	40
256.22	Ten-key add listing machine	7	2	1	43
256.23	Alphabetic filing	13	4	2	46
256.24	Transcribing machines	18	2	6	44

Table 21 (continued)

LAP number	Title or competency	Number of times			
		Reviewed	Copied	Ordered	Percent[a]
256.25	Shipping/receiving	4	0	2	50
256.26	Office occupations manual	18	2	9	61
256.27	Alphabetic filing	1	0	1	100
256.28	Filing	9	3	6	100
256.29	Machine transcription	15	2	4	40
256.30	Civil service training	34	6	10	47
256.31	Alphabetical filing	8	2	1	38
256.32	Calculating machines	5	1	2	60
256.33	Machine transcription	18	3	5	44
256.34	Model office demonstration	19	0	10	53
256.35	Ten-key adding machine	5	0	1	20
256.36	Mimeograph machine	11	2	4	55
256.37	Fluid duplication	4	0	1	25
256.38	Stenorette transcribing	9	0	3	33
256.39	Coup 220 computer	0	0	0	0
256.40	Typing a stencil	14	2	2	29
256.41	SCOPE	25	8	10	72
256.42	Ten-key adding machine	6	0	2	33
256.43	Ten-key adding machine	3	0	1	33
256.44	Ten-key adding machine	9	3	1	44
256.45	Reading instructions	40	11	18	73
256.46	Printing calculator	6	0	3	50
256.47	Ten-key adding machine	11	0	7	64
256.48	Mail procedures	25	2	15	68
256.49	Single entry records	3	0	2	67
256.50	Alphabetic filing	8	3	4	88
256.51	Operating a calculator	1	0	0	0
256.52	Ten-key printer	1	0	1	100
256.53	Business education department	16	1	3	25
257	Office reference books	40	11	11	55
257.1	Stenotype theory	9	2	5	78
257.2	Dictating shorthand	28	6	9	54
257.3	Shorthand theory	34	8	10	53
258	Typing image masters	6	2	2	67

Table 21 (continued)

LAP number	Title or competency	Number of times Reviewed	Copied	Ordered	Percent[a]
258.1	Preparing mimeograph stencils	7	3	2	71
258.2	Proofreading improvement	20	4	4	40
258.3	Vertical centering	14	4	3	50
258.4	Production methods contract	2	1	0	50
258.5	Horizontal centering	17	6	7	76
258.6	Report writing unit	8	1	1	25
258.7	Block style letters	5	2	2	80
258.8	Mailable letter	15	2	5	47
258.9	MT/ST	1	0	0	0
258.10	MT/ST	1	1	0	100
258.11	Capitalization in typing	13	4	1	38
258.12	Medical typist	41	2	18	49
258.13	Typewriting sequence	8	1	2	38
258.14	Correcting typing errors	17	5	2	41
258.15	Tabulation	11	0	0	0
258.16	Typing	8	0	0	0
258.17	Parts of a business letter	12	2	1	25
258.18	Letter styles	10	1	3	40
258.19	Letter margins	12	3	2	42
258.20	Vertical centering	9	4	0	44
258.21	Quarter plan in typing	11	4	2	55
258.22	Quarter plan in typing	7	5	1	86
258.23	Quarter plan in typing	9	5	2	78
258.24	Quarter plan in typing	7	3	1	57
258.25	Script--tabulation	1	1	0	100
258.26	Script--envelopes	1	1	0	100
258.27	Script--IBM typewriter	8	3	1	50
258.28	Script--typing letters	2	0	0	0
258.29	IBM Selectric	6	2	1	50
258.30	Letter folding	8	2	2	50
258.31	Home row and key stroking	9	3	2	56
258.32	Introduction to beginning typing	10	3	0	30

Table 21 (continued)

LAP number	Title or competency	Number of times			
		Reviewed	Copied	Ordered	Percent[a]
258.33	Stencils	19	6	7	68
258.34	Spirit masterset	19	4	8	63
258.35	Centering and tabulations	14	1	8	64
258.36	Legal typing	39	2	16	46
258.37	Typewriting	7	0	4	57
258.38	Introduction to electric	6	0	3	50
258.39	Introduction to IBM Selectric	14	2	5	50
258.40	Introduction to IBM standard	5	0	1	20
258.41	Outlines and manuscripts	9	1	4	56
258.42	Typewriting review	18	2	6	44
258.43	Personal and business letters	9	1	3	44
258.44	Tabulation	15	0	5	33
258.45	Tabulating ruled tables	8	0	5	63
258.46	Long leftbound manuscripts	7	0	4	57
258.47	Leftbound manuscripts	7	0	3	43
258.48	Vertical centering	10	1	3	40
258.50	Office machines	14	2	2	29
259	Budgeting	18	9	4	72
259.1	Auto insurance	19	5	8	68
259.2	Savings and loans	8	1	3	50
259.3	Savings and investments	13	2	3	38
259.4	How to read stock listings	24	9	10	79
259.5	Family finance	17	5	4	53
259.6	Auto insurance	19	1	8	47
259.7	Checking credit	11	1	3	36
259.8	Budgeting	20	5	4	45
260	Juvenile court proceedings	19	3	12	79
260.1	Laws of arrest	17	3	5	47
261	Investing in stocks	14	2	2	29
261.1	Investing in stocks	17	5	6	65
262	Fractions to decimals	25	7	8	60
262.1	Decimal fractions	9	2	0	36
262.2	Percentage	17	5	4	53
262.3	Reading stock quotations	10	2	0	20

Table 21 (continued)

LAP number	Title or competency	Number of times Reviewed	Copied	Ordered	Percent[a]
262.4	Fundamental math	16	4	7	69
262.5	Slow learners in math	11	2	3	45
262.6	Office math--percent	25	6	8	56
262.7	Low achiever math	6	0	1	17
262.8	Basic math skills	16	6	2	50
262.9	Interest	17	6	6	71
262.10	Business computations	5	0	1	20
262.11	Decimals	23	9	6	65
262.12	Fractions to decimals	28	13	6	68
262.13	Taxes	10	1	3	40
263	Application letter	25	4	8	48
263.1	Application letter	35	6	13	54
263.3	Punctuation with the comma	12	4	4	67
263.5	Writing reports and forms	3	2	0	67
263.6	Spelling and word usage	6	1	2	50
263.7	Dictionary usage	3	0	1	33
263.8	Business letters	3	0	2	67
263.9	Spelling	9	0	7	78
263.10	Spelling demonstrations	5	0	4	80
263.11	Written communications	7	2	3	71
263.12	How's your spelling	24	3	9	50
263.13	Business English	3	0	3	100
264	Job selection	28	6	14	71
264.1	Personality traits	29	6	11	59
264.2	Personal grooming	27	9	8	63
265	Career guidance	24	6	9	63
265.1	Good grooming	39	10	16	72
265.2	Grooming	38	20	5	66
265.3	Boy's grooming	2	1	1	100
265.4	Job interview	7	1	6	100
265.5	Introduction to business occupations	12	2	2	33
265.6	Student records	14	11	1	86
265.7	Careers	9	3	3	67

Table 21 (continued)

LAP number	Title or competency	Number of times Reviewed	Copied	Ordered	Percent[a]
265.8	Can I get a job	6	1	4	83
265.9	Introduction to reprographics	1	0	1	100
265.10	Your posture talks	10	4	6	100
265.11	Modular scheduling	1	0	0	0
265.12	How to write a resumé	2	0	2	100
265.13	Personnel policies	5	0	4	80
265.14	Write a resumé	20	5	10	75
265.15	Dressing for an interview	13	5	1	46
265.16	The dictionary	14	6	2	57
265.17	A plan for career education	0	0	0	0
265.18	Career development	11	1	1	18
265.19	Career development	5	0	0	0
265.20	Career development	14	3	5	57
265.21	Applying for a job	7	2	0	29
265.22	Career development	12	3	3	50
265.23	Career opportunities	19	3	5	43
265.24	A day on the job	20	9	5	70
265.25	Employee rights	3	1	2	100
265.27	The application form	1	0	1	100
265.28	Letters of application	12	5	4	75
266	Recording on an IBM card	22	3	4	32
266.1	Data processing theory	23	8	5	57
266.2	Data processing education	15	4	5	60
267	On the job distributive education	5	4	0	80
267.1	Work experience	11	6	1	64
267.2	Vocational education promotion	31	5	10	48
268	Film and slide projection	4	1	2	75
269	Economic understanding	6	3	1	67
269.1	Income tax	20	2	13	75
270	Office simulation	21	0	16	76
270.1	Orientation--office simulation	30	14	7	70
271	Interviewing for a job	19	7	5	63
271.1	Information sources	7	2	1	43

Table 21 (continued)

LAP number	Title or competency	Number of times Reviewed	Copied	Ordered	Percent[a]
271.2	Reports, manuals, directories	14	4	0	29
271.3	Job applications	31	6	0	19
272	FBLA monthly report	5	4	1	100
273	Retail merchandising--DECA	5	0	3	60